

Course – B.A. Geography

Paper Code: GEOG CC -203

Paper Name: Human Geography

Semester II

Topic: Optimum Population Theory

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The Optimum Population Theory

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Introduction

- The optimum population is the ideal population which combined with other available resources or means of production of the country will yield the maximum return or income per head.
- The optimum theory of population was propounded by Edwin Cannan in his book Wealth(1924).
- The theory was popularised by Robbins, Carr saunder and Dalton.

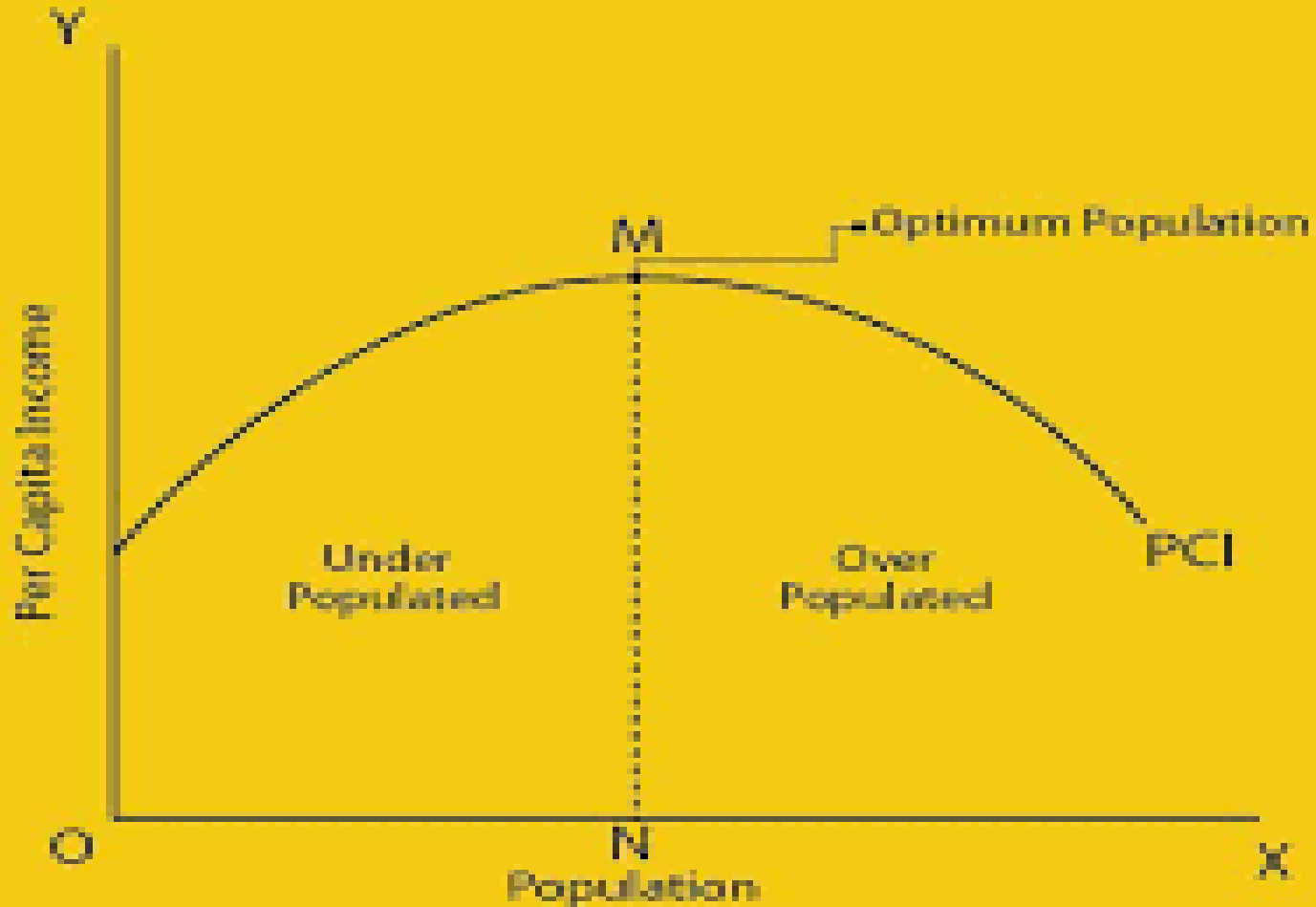
Definitions

- **Robbins** defines it as ‘the population which just makes the maximum returns possible is the optimum population or the best possible population’.
- **Carr-Saunders** defines it as ‘that population which produces maximum economic welfare.’
- According to **Dalton**, ‘Optimum population is that which gives the maximum income per head.’
- Dalton’s view is more scientific and realistic .

Assumptions

- The theory is based on following assumptions:
 1. The natural resources of a country are given at a point of time, but they change over time.
 2. There is no change in techniques of production.
 3. The stock of capital remains constant.
 4. The habits and taste of the people do not change.
 5. The ratio of the working population to total population remains constant even with the growth of population.
 6. Working hours of labour do not change.
 7. Modes of business organisation are constant.

OPTIMUM POPULATION



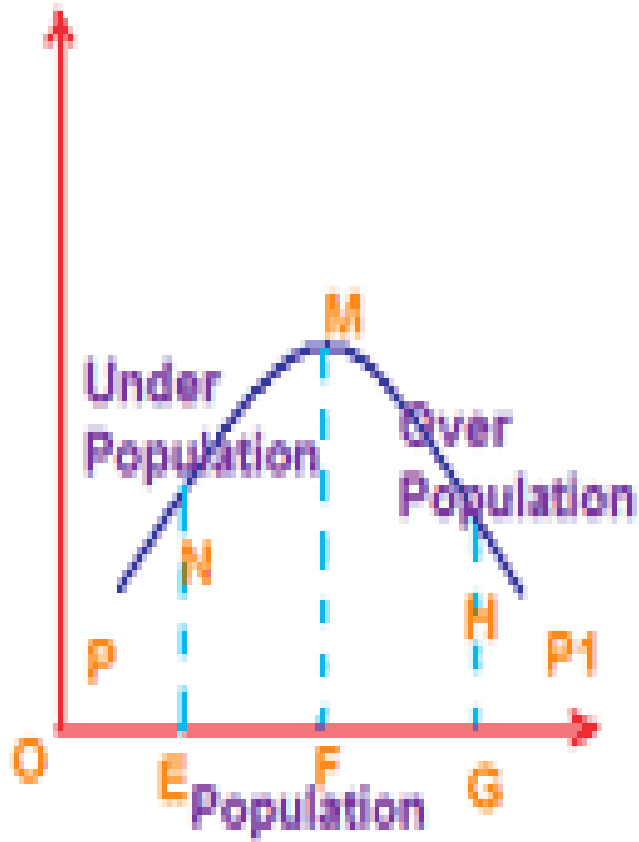
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The Theory

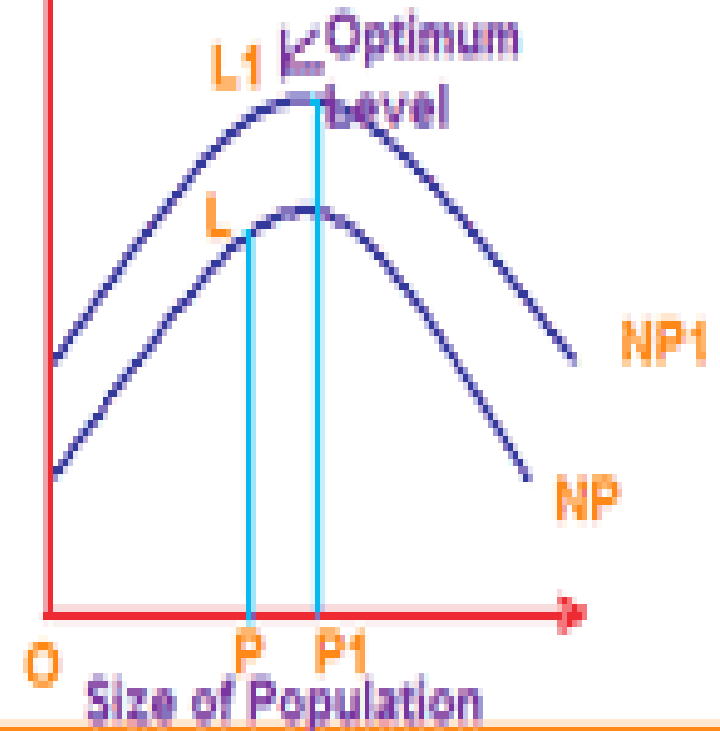
- The optimum population is that ideal size of population which provides the maximum income per head.
- Any rise or reduction in size of population above or below the optimum level will diminish income per head.
- Given the stock of natural resources, the technique of production and stock of capital in a country, there is a definite size of population corresponding to highest per capita income.
- Other things being equal, any deviation from optimum size population will lead to reduction in per capita income.

- If the increase in population is followed by the increase in per capita income, the country is under-populated and it can afford to increase in population till it reach the optimum level.
- If the increase in population leads to diminution of per capita income, the country is over-populated and needs a decline in population till the per capita income is maximised.
- The per capita income is the highest at the optimum point, after that the average product of labour start falling.

Per Capita Income



Average Product of Labour



*Source of Figure: Google Image

- **Optimum population is not fixed point, it changes with the change in any of the factors.**
- If there is improvements in methods and techniques of production, the output per head will rise and the optimum point will shift upwards.
- With increase in stock of natural resources, the optimum point of the country will increase.

Dalton's Formula

- Dalton has deduced overpopulation and under population which result into deviation from optimum level of population in the form of a formula.
- The deviation from the optimum is maladjustment.
- Maladjustment is a function of two variables, the optimum level of population O and the actual level of population A . Then the maladjustment is
- $$M = A - O / O$$
- If M is positive, the country is overpopulated, and if it is negative, the country is under populated.
- When M is 0, the country possesses optimum population.

Critical Analysis

- No Evidence of optimum level in any country
- Difficult to measure optimum level
- Correct measure of per capita income is not possible
- Neglects the distribution aspects of per capita income
- Optimum level not fixed but changes with time
- Neglects social and institutional conditions
- No place in state policies
- Does not explain the determinants of population growth.

Superiority over Malthusian Theory

- Theory is superior to Malthusian theory as it is applicable to all countries irrespective of their economic conditions.
- The theory related the problem of population to the total population of the country, both agricultural and industrial.
- The concept is dynamic as over period of time, per capita income may increase with the expansion of the output due to improvement in knowledge, skill, capital, equipment.
- The theory adopts an optimistic and realistic viewpoint towards the problem of population.

Thank You