

4th SEMESTER

CC-8

Unit - 3

PUBLIC GOODS AND MARKET FAILURES

- Public goods are those goods which are Non-Rivalry and Non-Exclusive in consumption. Example - National Defense, television signals, pollution control project, etc.
- These Public goods, like National defense is non rivalry in consumption because consumption of these goods by an individual does not reduce its amount available for other consumers.
- Non-excludability means goods that provide to all members of a society and benefits are available to all equally, irrespective of whether some people pay for it or not.
- This non-exclusive nature of a public good causes market failure. This characteristic create Free-Rider Problem.
- Free-Rider: A Free Rider is an individual who receives the benefit of consuming public good without paying for it.

Therefore, Free-Rider's problem arise when producers are not able to prevent those from consuming these who do not pay their share of cost.

Due to the presence of Free-Rider, goods are not provided through the market mechanism.

This can be seen with the help of the following diagrams:

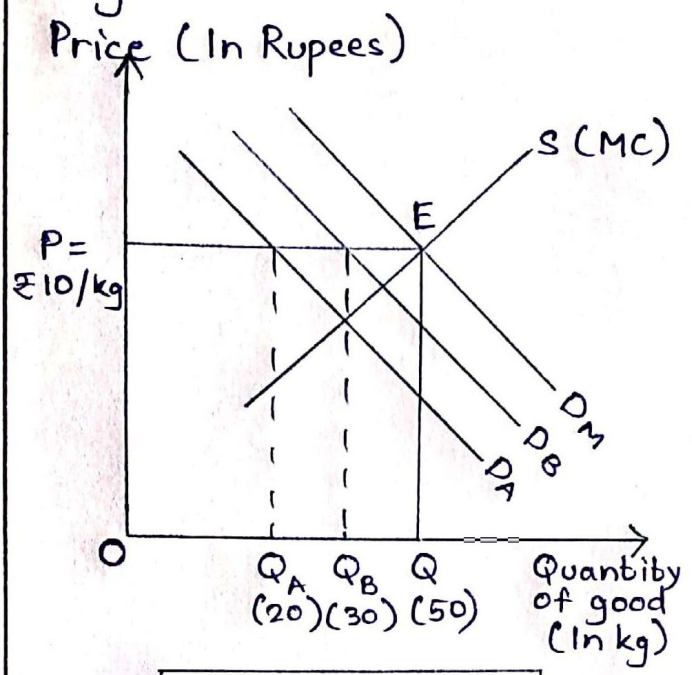


Fig. 1
Private Good

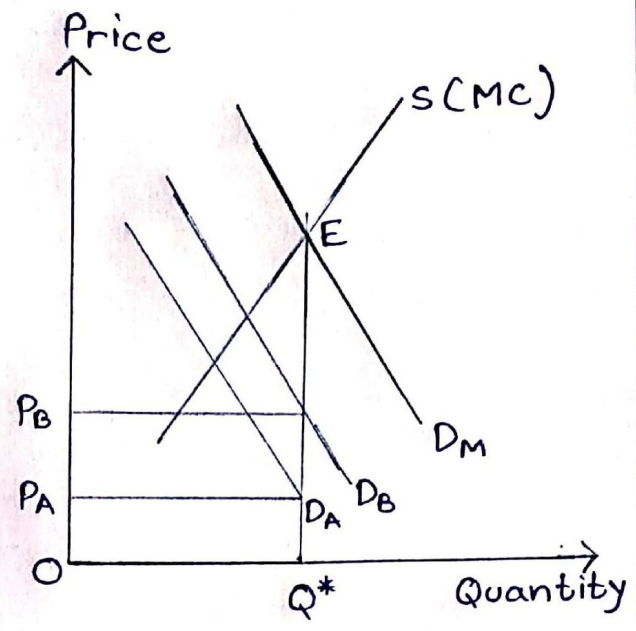


Fig. 2
Public Good

Suppose there are two individuals in the market, individual A and B, and their corresponding demand curve is D_A and D_B .

Since a private good is rival in consumption, the market demand curve of it is obtained by adding up sideways (Horizontal addition) of the individual demand curve.

In Fig. 1, the market demand curve of the private good is D_M and the supply curve is 'S'. The equilibrium price which is determined through the market mechanism is 'OP' where P is ₹10 per kg and the quantity of good available in the market is 50 kg.

Here, we can see that price of the good is same for all individual. If individual A demands for 20 kg, then A must pay ₹ 200. That means if any individual does not pay ₹ 10/kg, then he is excluded from consuming this good.

- In Fig. 2, D_A and D_B is the demand curve of the public good for individual A and B, respectively.
- The market demand curve for the public good is denoted by D_M in Fig. 2, which is derived by summing up vertically the demand curves of the individual demand curves.
- Consider Fig. 2. It will be seen that individual A is prepared to pay price OP_A for OQ^* quality of public good and the individual B is prepared to pay price OP_B for the same quantity of public good OQ^* .

Thus, in case of public goods, same units of output can be consumed by different individuals at different price or there may be some people who do not pay for this benefit. Due to this problem, a profit maximizing firm will either not produce a public good or produce too little of it. This creates economic inefficiency.

Reference -

1. H.L. Ahuja : 'Principles of Microeconomics'
2. Robert S. Pindyck & Daniel L. Rubinfeld :
'Microeconomics' - Prentice Hall.

Questions -

1. What is Public Good ?
2. What are the characteristics of Public Goods?
3. What do you understand by Free-Rider Problem?
4. Explain that competitive market fail due to the presence of Public Goods.