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Class 12  
Economics:

Explain using examples, the concept of external costs and benefits. Why are these market failures? What can governments and society do to correct these externalities?

A market represents the private forces of demand and supply. Consumers demand products to maximise their own welfare and producers supply them to maximise their own profit. However, there are cases where markets clearly do not work well, or do not work at all. These cases are known as market failures. There are many market activities that affect other people. These are known as externalities. They are the positive and/ or negative effects that exchanges between producers and consumers may have on people who are not in the market. When such effects are pleasurable they are called external benefits. When they are unpleasant, or impose a cost on people other than the buyers or sellers, they are called external costs.

Externalities occur when one person's actions affect another person's well being and the extra costs and benefits are not reflected in the price. A positive externality is for example when my neighbours benefit from my cleaning up my garden. A negative externality arises when one person's actions harm another. For example polluting, factory owners may not consider the costs that pollution imposes on others.

Public goods have such massive positive externalities compared to small private benefits that they would barely be produced at all in a purely market economy. Public goods have two distinct aspects – "non-excludability" and "non-rivalrous consumption." Non- excludability means that nonpayers cannot be excluded from the benefits of the good or service. If someone wants to stage a fireworks show, people can watch the show from their windows or gardens. Because the person cannot charge a fee for watching the fireworks, the fireworks show may go unproduced, even if demand for the show is strong. This fireworks example shows the "free-rider" problem [the tendency for the scale of provision of a public good to be too small – to be allocatively inefficient if privately provided]. Even if the fireworks show is worth ten dollars per person, no one will pay ten dollars to the person staging the show. Each person will seek to "free-ride" [someone who consumes a good or service without paying for it] by allowing others to pay for the show, and then watch for free from his or her window. If the free-rider problem cannot be solved, valuable goods and services will remain unproduced. People can be very selfish and think – If I cannot charge them for these benefits; I will not clean my garden as often as they would, or I will not stage a fireworks show. The free-rider problem and positive externalities are linked closely together.

Very often, exchanges between buyers and sellers affect others. People don't only buy clothes to keep warm, but most people buy them because they want to please or impress others. The same can be said about the cars they buy, the perfumes they use. These are all examples of positive externalities. We do something to please others.

Positive externalities are rarer than negative externalities. People don't want to be made responsible for the harm they cause others but will not give anything away for free. Producers do not bear all the costs associated with the production of their good. A by-product of the production process – the waste is dumped into rivers or

emitted into the atmosphere. The negative effects of production may interfere with the surrounding community. If there is a factory located in an area, people may have to paint their houses more frequently or seek medical attention more often due to the pollution. Homeowners may have to accept lower prices than usual for their property. All these costs are imposed on people not directly involved in the production, consumption, or exchange of the product or good.

An individual producer who voluntarily installs equipment to clean up pollution will have higher costs than his competitors. He will not be able to match price cuts, and so in the long run may be out of business. Some producers may not care whether they cause harm to others by polluting the environment. Even environmentally concerned producers cannot afford to care too much about the environment.

While most people are unaware of it, markets often solve public goods and externalities problems in a variety of ways. Businesses frequently solve free-rider problems by developing means of excluding nonpayers from enjoying the benefits of a good or service. You can only watch cable television, if you've paid for the service. Private roads charge the people that use them.

To see the effects of external benefits, consider the market for flu shots. The cost of producing vaccine includes labor, research and production equipment, materials, and transportation. Individuals receive important personal benefits from flu shots. The fact that many millions of people pay for them every year shows that there is a demand. In getting shots for themselves, however, people also provide external benefits for others. By protecting themselves, they reduce the probability that the flu will spread to others.

Because a free market can fail to capture such external benefits, government action to subsidize flu shots may be imposed.

It can also be extended to services such as public transportation. City buses, trams or trains provide direct benefits to the general population – there is less pollution and people spend less time in traffic jams, which even makes them healthier as they are not under so much stress and can relax more. Public parks and environmental programs can also provide external benefits that are not likely to be realized privately, because of their high cost to individuals. Again, government action may be required to supplement private efforts.

Most economic arguments for government intervention are based on the idea that the market simply cannot provide public goods or handle externalities. Public health and welfare programs, education, roads, research and development, national and domestic security and a clean environment all have been labelled public goods.

Whenever government intervenes in any situation, extra agencies are set up and extra employees must be hired. The government will always have to pay a significant cost in order to correct small market inefficiencies. If the cost of government intervention exceeds the cost of the market's inefficiencies, government action will actually increase overall inefficiency. A second reason for limiting government action is that it generates external costs of its own. If government dictates the construction methods to be used in building homes etc the people who set the standards impose a cost.

However, government action can guarantee that certain goods and services will be produced more efficiently. The benefits of such action may be substantial, even when compared with the costs. Government action can take several forms; persuasion; assignment of communal property rights to individuals; government production of goods and services; regulation of production through published standards; and control of

product prices through taxes, fines, and subsidies. Governments put a tax on goods, which have negative externalities. For example, alcohol impairs judgement and alters behaviour, therefore some of the consequences of drinking may have negative effects on other people. Drunkenness can cause road traffic accidents and violence to others. Another way to try persuade people not to do these things is the anti-smoking, anti-drink and anti-drug campaigns. On the other hand, a private good which has many positive externalities will be encouraged by the government. The government could sponsor an advertising campaign to promote use of the good. For example the use of contraception to prevent the spread of AIDS. A different approach would be to offer the good free but ration supply – free public transport to the young and elderly. Medical care for example, might be free but with access controlled by the medical professionals who decide which patients need certain services. The government could also offer the producer subsidy, which is the exact opposite of a tax.

The biggest problems are with the public goods although well-defined property rights can solve public goods problems in environmental areas, such as land use and species preservation. Property rights are a less effective solution for environmental problems involving the air, however, because rights to the air cannot be defined and enforced easily as air is a free good as it isn't scarce.

A more practical solution is to increase private ownership in the system of property rights. Many people argue that externalities exist when property rights are incomplete. Reducing the role of private property would make the externality problem worse. When no one owns the air or water, there is no incentive to avoid an overuse of the resource.

Private-property rights force people to take into account all costs and benefits of their actions. When a resource is owned by all, when it is free, there is a strong tendency for individuals to misuse that resource.

The existence of private property rights allows the law to deal with externality problems. Finally, there may not be a good solution to the problem of "free" resources for two reasons. First, the cost of a solution may be greater than the benefits of the solution. Second, there may be externality problems within the government just as there can be externality problems in the market. When there are externality problems in the market, we can call on the government as an outside agent to solve them. But if these problems exist in the government, there is no one to turn to.