

Chapter 5: Market Failures: Public Goods and Externalities

Our market economy relies on the incentives of producers and consumers to provide the correct quantity of goods at prices that result in the most efficient use of our scarce resources. But what happens if the market mechanism fails? What if consumers want a product that firms have no incentive to privately produce? What if firms overproduce or underproduce products because of problems with the incentive system? Chapter 5 introduces discussion of the role of government in correcting market failures.

Markets only work effectively when demand fully reflects consumers' willingness to pay and when supply fully includes all of the costs of production. In that situation, consumer and producer surplus are maximized, and productive and allocative efficiency are achieved. But if a product is over- or underproduced, a deadweight loss develops, representing the loss of producer and consumer surplus resulting from an inefficient output. It is important to be able to graphically illustrate consumer and producer surplus and the area of deadweight loss.

The market fails for public goods because they lack the characteristics of rival consumption and excludability. One person enjoying national defense protection does not preclude her neighbor from enjoying the very same national defense protection, so once a public good is provided, everyone can use it. Further, those who refuse to pay for the public good cannot be easily excluded from using that product. As a result, private firms have no profit incentive to provide the good, because free riders would simply use it without paying for it. In such cases, governments provide the public good and then collect mandatory taxes to recover the costs of providing the good, eliminating the free-rider problem.

Externalities occur when the costs or benefits of an economic activity spill over onto other people who are not producers or consumers of the product. In the case of a negative externality, such as pollution, producers send their pollution up the smokestack or out through the waterway, reducing their costs of pollution by pushing them onto the community which must breathe the polluted air or drink the polluted water. Because it is not fully considering its costs, the firm overproduces, increasing supply and reducing prices. The government can restore market efficiency by regulating or taxing pollution output, forcing the firm to absorb its production costs and reduce supply. Positive externalities, such as vaccinations, occur when people other than the consumer also benefit from consumption. Because the consumer does not consider these other benefits, too little of the product is purchased. The government restores market efficiency in this case by providing the product or subsidizing the price to increase consumption.

In each case of market failure, efficiency is achieved by a careful review of cost-benefit analysis. The government's intervention, whether it is cleaning up an oil spill or providing traffic lights, is optimal where the marginal cost equals the marginal benefit of the action.

Material from Chapter 5 is found in a few multiple-choice questions and frequently appears as a free-response question on the AP Microeconomics Exam. It is very important to be able to draw illustrations of these markets, both in failure and after proper government intervention, and to explain the appropriate measures to correct market failures.