

CHAPTER 8

Market Failure versus Government Failure

Chapter Goals

- Explain what an externality is and show how it affects the market outcome.
- Describe three methods of dealing with externalities.
- Define *public good* and explain the problem with determining the value of a public good to society.
- Explain how informational and moral hazard problems can lead to market failure.
- Explain why market failure is not necessarily a reason for government intervention.

Market Failures

A **market failure** is a situation in which the invisible hand pushes in such a way that individual decisions do not lead to socially desirable outcomes.

They can be caused by:

- Externalities
- Public goods
- Imperfect information

Government failures are when the government intervention actually makes the situation worse.

Externalities

Externalities are the effects of a decision on a third party that are not taken into account by the decision-maker.

Negative externalities occur when the effects are detrimental to others. Example: Second-hand smoke and carbon monoxide emissions

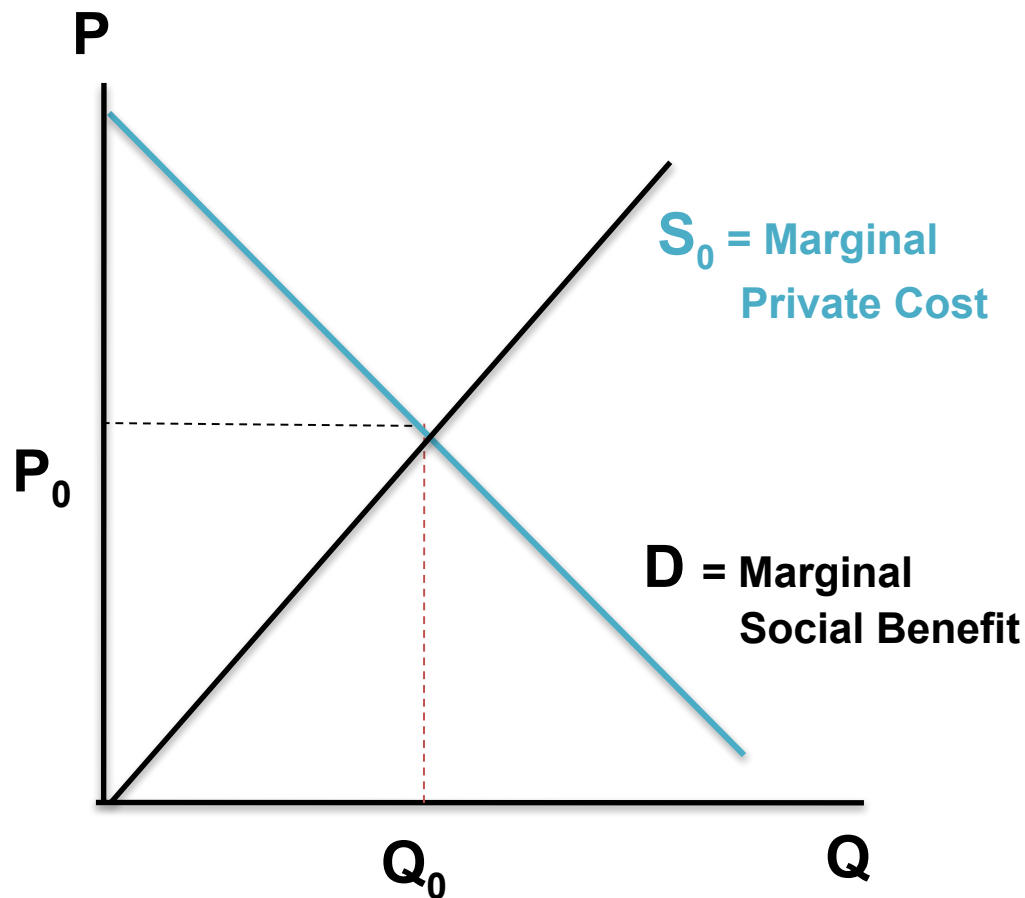
Positive externalities occur when the effects are beneficial to others. Example: Education

No Externality Example

When there are no externalities, the supply curve S represents the marginal private cost to society and the demand curve D represents the marginal private benefit to society.

At equilibrium, the private and social benefits are equal and society is as well off as possible.

No Externality Example



Because there are no externalities, the supply curve and demand curve represent the marginal social cost and benefits of producing and consuming steel.

If there are no externalities, P_0Q_0 is the equilibrium.

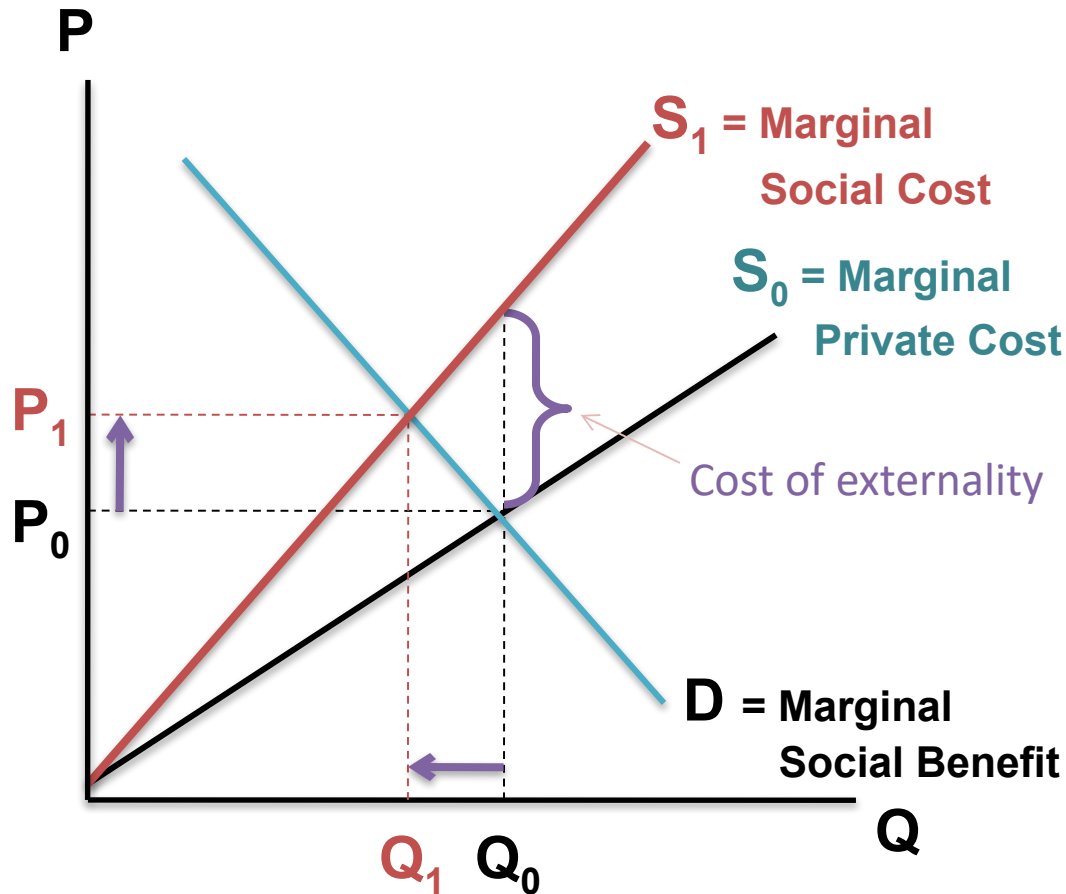
A Negative Externality Example

When there are negative externalities, the marginal social cost differs from the marginal private cost.

The **marginal social cost** includes the marginal private costs of production plus the cost of negative externalities associated with that production.

It includes *all* the marginal costs that society bears.

A Negative Externality Example



If there are no externalities, P_0Q_0 is the equilibrium.

When there is a negative externality, the marginal private cost will be below the marginal social cost and the competitive price will be too low to maximize social welfare.

Government intervention may be necessary to **reduce production**.

A Negative Externality Example

When there are negative externalities, the marginal social cost differs from the marginal private cost.

The **marginal social cost** includes the marginal private costs of production plus the cost of negative externalities associated with that production.

- It includes *all* the marginal costs that society bears.

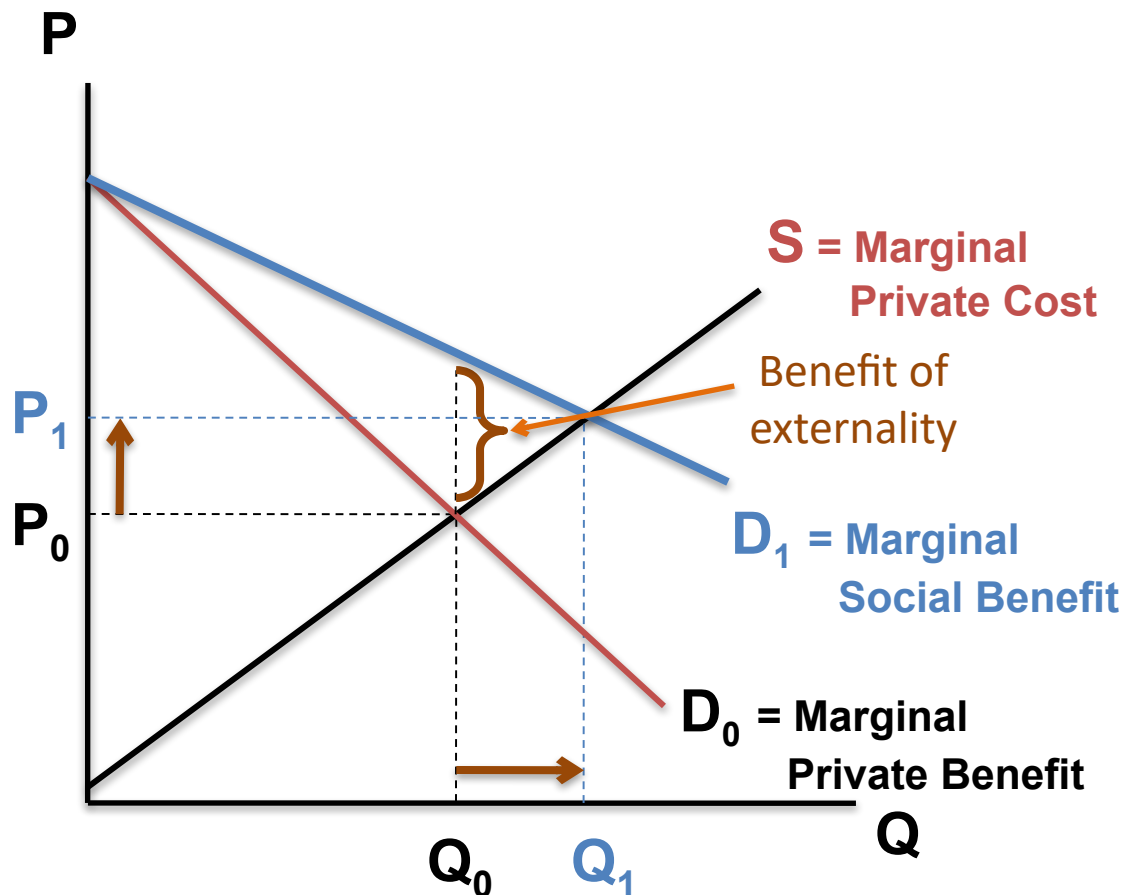
A Positive Externality Example

When there are positive externalities, the marginal social benefit differs from the marginal private benefit.

The **marginal social benefit** includes the marginal private benefit of consumption plus the benefits of positive externalities resulting from consuming that good.

- It includes *all* the marginal benefits that society receives.

A Positive Externality Example



If there are no externalities, P_0Q_0 is the equilibrium.

When there is a positive externality, the marginal social benefit will be above the marginal private benefit and the market price will be too low to maximize social welfare.

Government intervention may be necessary to **increase consumption**.

Alternative Methods of Dealing with Externalities

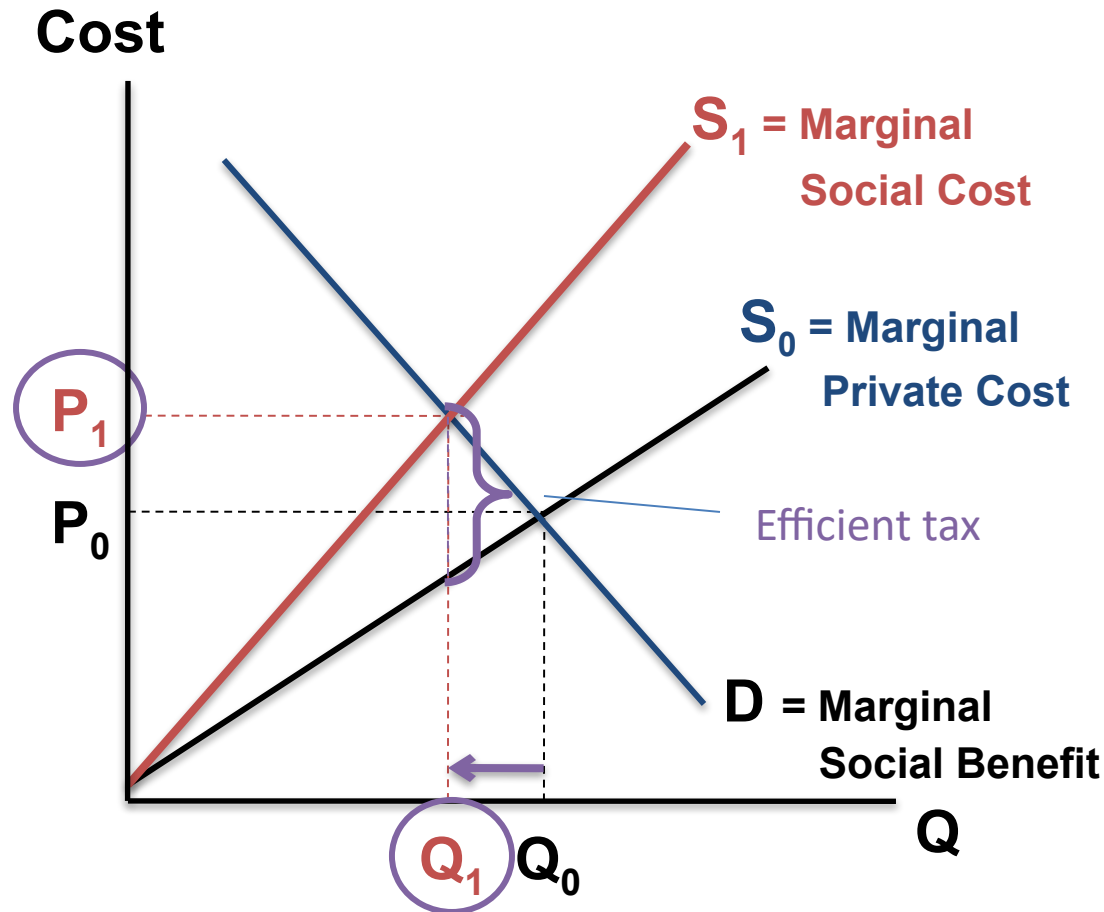
Direct regulation is when the government directly limits the amount of a good people are allowed to use.

Incentive policies:

- **Tax incentives** are programs using a tax to create incentives for individuals to structure their activities in a way that is consistent with the desired ends
- **Market incentives** are plans requiring market participants to certify that they have reduced total consumption by a certain amount

Voluntary reductions.

Tax Incentive Policies



A tax on pollution that equals the social cost of the negative externality will cause individuals to *reduce* the quantity of the pollution causing activity to the socially optimal level Q_1 .

Such taxes are often called **effluent fees**, charges imposed by government on the level of pollution created.

Market Incentive Policies

A market incentive plan is similar to direct regulation in that the amount of the good consumed is reduced.

A market incentive plan differs from direct regulation because individuals who reduce consumption by more than the required amount receive marketable certificates that can be sold to others.

Incentive policies are more efficient than direct regulatory policies

Voluntary Reductions

Voluntary reductions allow individuals to choose whether to follow what is socially optimal or what is privately optimal.

The socially conscious will often become discouraged and quit contributing when they believe a large number of people are free riding.

Free rider problem is individuals' unwillingness to share the cost of a public good.

The Optimal Policy

An **optimal policy** is one in which the marginal cost of undertaking the policy equals the marginal benefit of that policy.

Resources are being wasted if a policy isn't optimal.

For example, the optimal level of pollution is not zero pollution, but the amount where the marginal benefit of reducing pollution equals the marginal cost.

Public Goods

A **public good** is nonexclusive and nonrival

- **Nonexclusive:** No one can be excluded from its benefits.
- **Nonrival:** Consumption by one does not preclude consumption by others.

Many goods provided by the government have public-good aspects to them.

There are no pure public goods; national defense is the closest example.

Public Goods

A private good is only supplied to the individual who bought it.

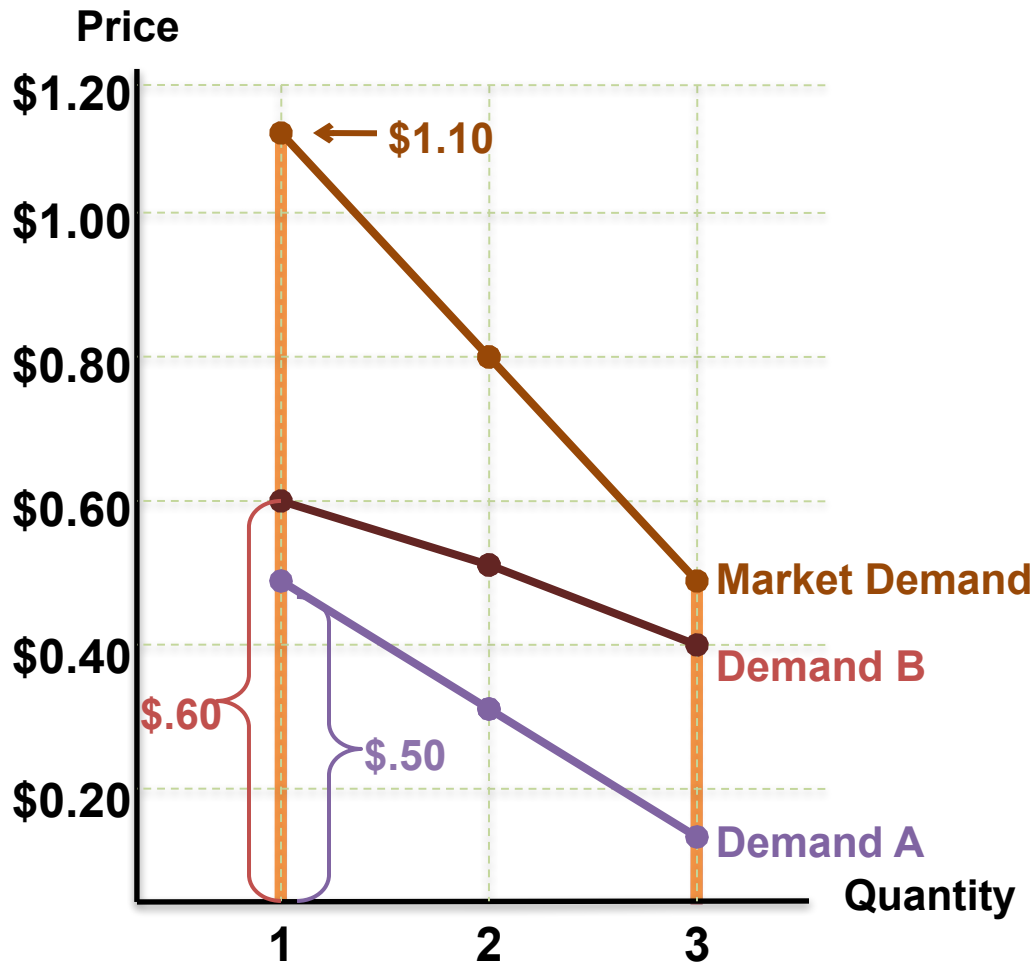
Once a pure public good is supplied to one individual, it is simultaneously supplied to all.

In the case of a public good, the social benefit of a public good (its demand curve) is the sum of the individual benefits (value on the vertical axis).

To create market demand:

- Private goods: sum demand curves horizontally
- Public goods: sum demand curves vertically

The Market Value of a Public Good



A public good is enjoyed by many people without diminishing in value.

Individual A's demand is vertically summed with...

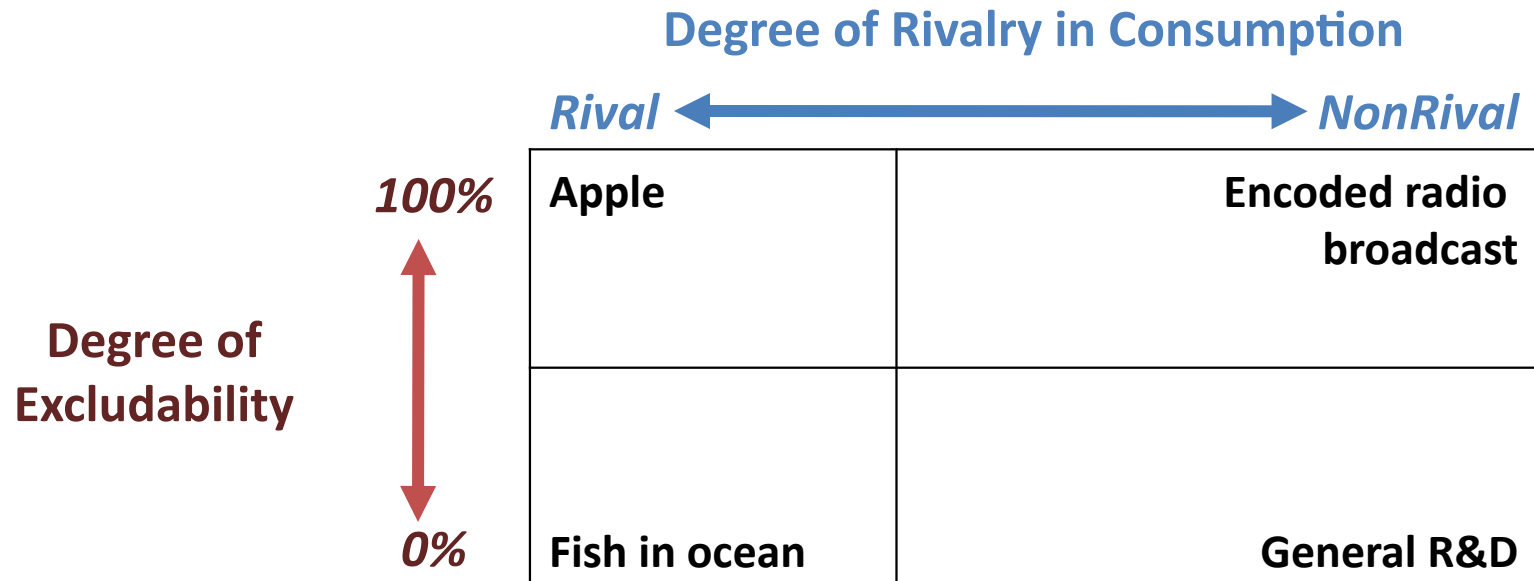
Individual B's demand to equal...

market demand for a public good.

Excludability and the Costs of Pricing

The public-/private-good differentiation is seldom clear-cut.

Some economists prefer to classify goods according to their degree of rivalry and excludability.



Informational and Moral Hazard Problems

Perfectly competitive markets assume perfect information.

In the real world, buyers and sellers do not usually have equal information, and imperfect information can be a cause of a market failure

An **adverse selection problem** is a problem that occurs when buyers and sellers have different amounts of information about the good for sale

A **moral hazard problem** is a problem that arises when people don't have to bear the negative consequences of their actions

Signaling and Screening

Signaling may offset information problems.

Signaling refers to an action taken by an informed party that reveals information to an uninformed party that offsets the false signal that caused the adverse selection in the first place.

Selling a used car may provide a false signal to the buyer that the car is a lemon. False signal can be offset by a warranty.

Informational problems can be partially resolved by screening.

Screening is an action taken by an uninformed party that induces the informed party to reveal information.

Policies to Deal with Informational Problems

Regulate the market and see that individuals provide the correct information.

License individuals in the market and require them to provide full information about the good being sold.

Allow markets to develop to provide information that people need and will buy.

Application: Licensing of Doctors

Medical care is an example of imperfect information. Patients usually don't have a way of knowing if a doctor is capable.

Current practice is to require medical licenses to establish a minimum level of competency.

Another option is to provide the public with information on:

- Grades in medical school
- Success rate for various procedures
- Charges and fees
- References

Government Failures and Market Failures

The three types of market failure covered (externalities, public goods, and informational problems) show that all real-world markets in some way fail.

Market failures should not automatically call for government intervention because governments fail, too.

Government failure occurs when the government intervention in the market to improve the market failure actually makes the situation worse.

Reasons for Government Failures

1. Government doesn't have an incentive to correct the problem.
2. Government doesn't have enough information to deal with the problem.
3. Intervention in markets is almost always more complicated than it initially seems.
4. The bureaucratic nature of government intervention does not allow fine-tuning.
5. Government intervention leads to more government intervention.

Chapter Summary (1 of 3)

An externality is the effect of a decision on a third party that is not taken into account by the decision maker.

Positive externalities provide third-party benefits and markets for these goods produce too little for too great a price.

Negative externalities impose third-party costs, and markets produce too much for too low a price.

Economists generally prefer incentive-based programs, such as a tax on the producer of a good with a negative externality, because incentive-based programs are more efficient than regulatory programs.

Chapter Summary (2 of 3)

Voluntary solutions are difficult to maintain because people have an incentive to be free riders.

An optimal policy is one in which the marginal cost of the undertaking equals its marginal benefit.

Public goods are nonexclusive and nonrival.

Adverse selection occurs when buyers or sellers withhold information causing the market for the good to disappear.

Licensure and full disclosure are solutions to the information problem.

Chapter Summary (3 of 3)

Government failure occurs because:

- Governments don't have an incentive and/or enough information to correct the problem.
- Intervention is more complicated than it initially seems.
- The bureaucratic nature of government precludes fine-tuning.
- Government intervention often leads to more government intervention.