Market Failures: Externalities

- When a market outcome affects parties other than the buyers and sellers in the market, side-effects are created called externalities.
- Externalities cause markets to be inefficient, and thus fail to maximize total surplus.

An externality arises...

...when a person engages in an activity that influences the well-being of a bystander and yet neither pays nor receives any compensation for that effect.
Market Failures: Externalities

- When the impact on the bystander is adverse, the externality is called a **negative externality**.
- When the impact on the bystander is beneficial, the externality is called a **positive externality**.

Examples of Negative Externalities

- Automobile exhaust
- Cigarette smoking
- Barking dogs (loud pets)
- Loud stereos in an apartment building

Examples of Positive Externalities

- Immunizations
- Restored historic buildings
- Research into new technologies
The Market for Aluminum...

Pollution and the Social Optimum...

Negative Externalities in Production

The intersection of the demand curve and the social-cost curve determines the optimal output level. The socially optimal output level is less than the market equilibrium quantity.
Positive Externalities in Production

When an externality benefits the bystanders, a positive externality exists.
- The social costs of production are less than the private cost to producers and consumers.

Positive Externalities in Production...

The intersection of the demand curve and the social-cost curve determines the optimal output level.
- The optimal output level is more than the equilibrium quantity.
- The market produces a smaller quantity than is socially desirable.
- The social costs of production are less than the private cost to producers and consumers.
Internalizing Production Externalities

- Taxes are the primary tools used to internalize negative externalities.
- Subsidies are the primary tools used to internalize positive externalities.

Consumption Externalities...

Externalities and Market Inefficiency

- Negative externalities in production or consumption lead markets to produce a larger quantity than is socially desirable.
- Positive externalities in production or consumption lead markets to produce a larger quantity than is socially desirable.
Private Solutions to Externalities

Government action is not always needed to solve the problem of externalities.

The Coase Theorem

The Coase Theorem states that if private parties can bargain without cost over the allocation of resources, then the private market will always solve the problem of externalities on its own and allocate resources efficiently.

Why Private Solutions Do Not Always Work

Sometimes the private solution approach fails because transaction costs can be so high that private agreement is not possible.
Public Policy Toward Externalities

When externalities are significant and private solutions are not found, government may attempt to solve the problem through . . .

- command-and-control policies.
- market-based policies.