Market Failure versus Government Failure

The business of government is to keep the government out of business—that is unless business needs government aid.

— Will Rogers
Market Failure versus Government Failure

Market Failures

• **Market failure**: a situation in which the free-market system fails to satisfy society’s wants (when the invisible hand does not work)

• 3 sources of market failure:
  • Externalities
  • Public goods
  • Imperfect information
Market Failures

• When market failure exists, it is possible for government intervention to help the situation

• However, government failures also exists
  • This is when the government intervention actually makes the situation worse
Externalities

- **Externalities** are an example of market failure
  - They exist when the external **benefits** or external **costs** are on someone other than the original decision maker (a third party)
  - The market fails to include external **costs** or external **benefits**
  - With no government involvement there would be too much of some goods and too little of others
Positive Externalities

- **Positive externalities** (or spillover benefits) occur when the effects are beneficial to others
  - Results in a benefit for someone other than the original decision maker
  - **Example:** Education; flu shots
Positive Externalities

• **Marginal private benefit (MPB):** those purchasing the good in the market

• **Marginal social benefit (MSB):** when third parties are better off when someone else consumes a good this increases benefit to society

  • Because of this benefit, society is willing and able to pay a higher price at every given quantity
Positive Externalities

• Marginal external benefit (MEB) represents the distance between MSB and MPB

• MEB+MPB=MSB
Positive Externalities

• If a third party benefits from the production or consumption of a good, even without directly buying it, the market always under produces a good with a positive externality.

• Due to this, DWL occurs when total surplus (CS+PS) is not maximized.
Market Failure versus Government Failure

Draw the Graph: Positive Externality

If there are no externalities, $P_1Q_1$ is the equilibrium.

If there are externalities, the marginal social benefit differs from the marginal private benefit, and both $P_1$ and $Q_1$ are too low to maximize social welfare.

Government intervention may be necessary to increase consumption.
Draw the Graph: Positive Externality

Now, let’s add DWL to the graph

\[ S = \text{Marginal Private Cost (MPC)} \]

\[ D_1 = \text{Marginal Private Benefit (MPB)} \]

\[ D_2 = \text{Marginal Social Benefit (MSB)} \]

Socially optimal quantity
Positive Externality

Graph showing MEB

$P_1$  $P_2$  $Q_1$  $Q_2$

$S = \text{Marginal Private Cost (MPC)}$

$D_1 = \text{Marginal Private Benefit (MPB)}$

$D_2 = \text{Marginal Social Benefit (MSB)}$

$\text{MEB = Marginal external benefit}$
Correcting the Positive Externality

- To correct the positive externality the government can **subsidize** the good (think flu shots)
- This subsidy shifts demand to the right (by the amount of the subsidy) and represents the marginal social benefit
Negative Externalities

- **Negative externalities (or spillover effects)** occur when the effects are detrimental to others
  - Results in a cost for someone other than the original decision maker
    - **Example:** Second-hand smoke and carbon monoxide emissions
Negative Externalities

- **Marginal social cost (MSC):** represents the cost to the firm and to the third parties.
- Since someone else consumes the good, the cost to society increases.
- Society incurs a higher cost at every given quantity so **MEC** (marginal external cost) is added to MPC to get MSC.
Negative Externalities

• For a negative externality, the good is overproduced which leads to DWL
If there are no externalities, $P_1Q_1$ is the equilibrium.

If there are externalities, the marginal social cost differs from the marginal private cost, and $P_1$ is too low and $Q_1$ is too high to maximize social welfare.

Government intervention may be necessary to reduce production.
Draw the Graph: Negative Externality

Now, let’s add DWL to the graph

\[ S_1 = \text{Marginal Private Cost (MPC)} \]

\[ S_2 = \text{Marginal Social Cost (MSC)} \]

D = Marginal Social Benefit (MSB)

Socially optimal quantity
Market Failure versus Government Failure

Draw the Graph: Negative Externality

Graph showing MEC

S₂ = Marginal Social Cost (MSC)
S₁ = Marginal Private Cost (MPC)

Marginal External Cost (MEC)

D = Marginal Social Benefit (MSB)
Correcting the Negative Externality

• To correct the negative externality, the government can place a **tax** on the good (think of cigarettes)

• This tax shifts S to the left and represents the MSC
Dealing with Externalities

• **Direct regulation**: when the government directly limits the amount of a good people are allowed to use

  • This does not take into consideration that the costs of reducing consumption differ among individuals
Dealing with Externalities: Incentive Policies

- **Tax incentives**: programs using a tax to create incentives for individuals to achieve a desired result

- **Market incentives**: plans that require a market participants (not individuals) to certify that they have reduced total consumption by a certain amount
  - They get a marketable certificate for reducing consumption and can sell this to others who have not reduced consumption by the required amount
Dealing with Externalities: Incentive Policies

• Overall, *incentive policies* are more efficient than direct regulatory policies
Example: 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 $Q_2$.

**Effluent fees** are charges imposed by governments on the level of pollution created.
Dealing with Externalities: Voluntary Reductions

• Voluntary solutions: let individuals voluntarily decide what to do: consume the same amount, consume less, etc.

• Voluntary reductions allow individuals to choose whether to follow what is socially optimal or what is privately optimal
Dealing with Externalities: Voluntary Reductions

• The problem: people will stop voluntary reductions when they believe others are not doing the same
  • This is an example of the free rider problem where people are consuming more than their fair share of a public good
Free Rider Problem

• The government provides public goods and services because in some cases it is impractical for the free-market to provide these goods because there is little opportunity to earn profit
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: it is the amount where the marginal benefit of reducing pollution equals the marginal cost
Public Goods

• A public good is an example of market failure
• These goods have to meet two pieces of criteria:
  • Nonexclusive: everyone can use the good no one can be excluded from its benefits (even if they don’t pay)
Public Goods

- **Nonrival (shared consumption):**
  consumption by one does not reduce the usefulness to others

- **Examples:** national defense and public parks
Private Goods

• A private good is only supplied to the individual who bought it
  • Example: If I consume an apple, you cannot consume that same apple
Imperfect Information (Informational Problems)

• The final example of market failure is imperfect information
  • An *adverse selection problem* is a problem that occurs when buyers and sellers have different amounts of information about the good for sale
Imperfect Information (Informational Problems)

- 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
  - **So this means**... that selling a used car may provide a false signal to the buyer that the car is a lemon
    - The false signal can be offset by a warranty
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
Government Failures and Market Failures

• All real-world markets fail in some way
• Market failures should not automatically call for government intervention because governments fail, too
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

• Three sources of market failure are externalities, public goods, and imperfect information

• 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
Chapter Summary

• 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 direct regulation or voluntary solutions.

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

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

- Public goods are nonexclusive and nonrival

- Theoretically the market value of a public good can be calculated by summing the value that each individual places on every quantity

- 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

• Government failure, in which intervention worsens the problem, occurs because:
  • Governments don’t have incentives and/or information to correct the problem
  • Intervention is more complicated than it initially seems
  • The bureaucratic nature of government precludes fine-tuning
  • Government intervention leads to more government intervention