CoreEconomics

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Consumer Surplus and Producer Surplus and Market Failure*

Efficient Market Requirements

To function efficiently, a market must exhibit the following:

- **Accurate information is widely available**
- **Property rights are protected**
- **Contract obligations are enforced**
- **There are no external costs or benefits**
- **Competitive markets prevail**

Property Rights

Property rights: **The clear delineation of ownership of property backed by government enforcement.**

The Discipline of Markets

- **Markets channel the self-interest of producers and consumers into an efficient, ordered economy.**
- **Markets ration the limited resources toward those goods society wants most.**
- **Prices are the signal.**

Measuring Market Efficiency

Markets are efficient: we can measure their benefit to society by measuring:

- **Consumer surplus**
- **Producer surplus**

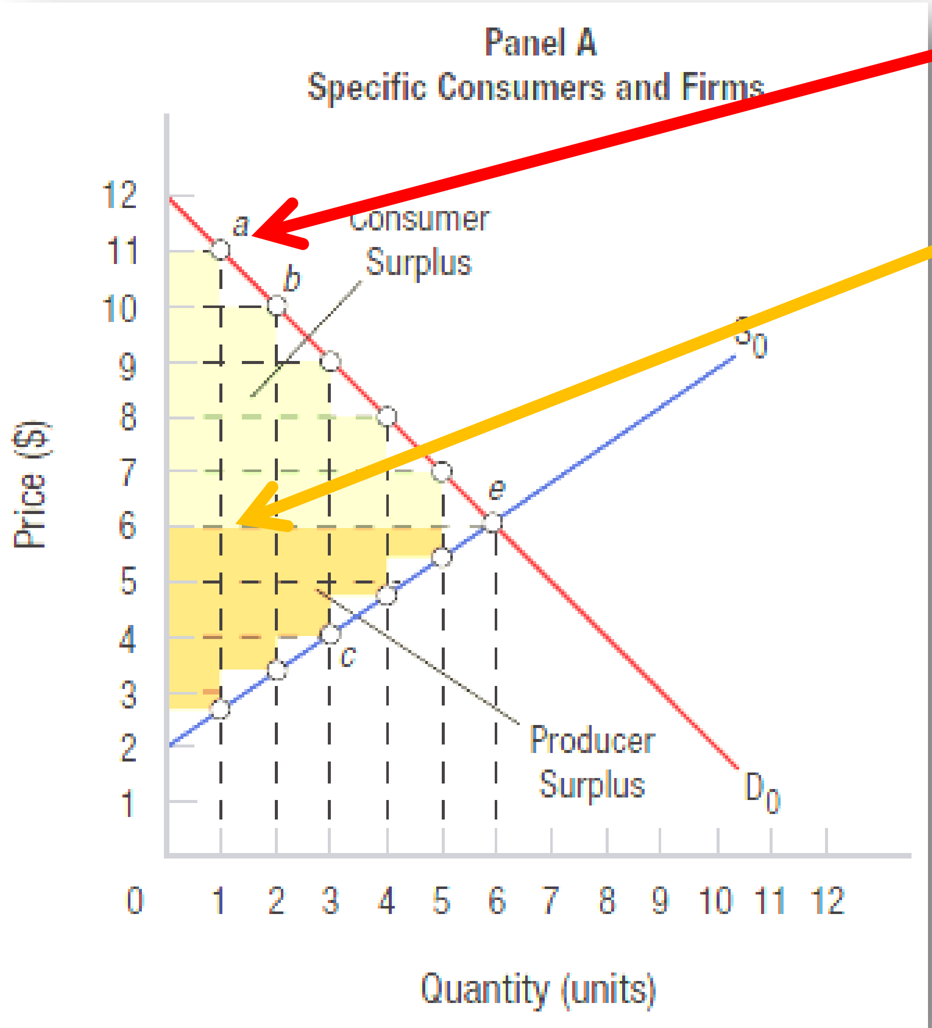
Consumer Surplus

***Consumer surplus*: The difference between market price and what consumers (as individuals or the market) would be willing to pay.**

Producer Surplus

Producer surplus: **The difference between market price and the price at which firms are willing to supply the product.**

Individual Consumer Surplus



Consumer *"a"* is willing to pay $11

But only HAS to pay $6 (market price = $6)

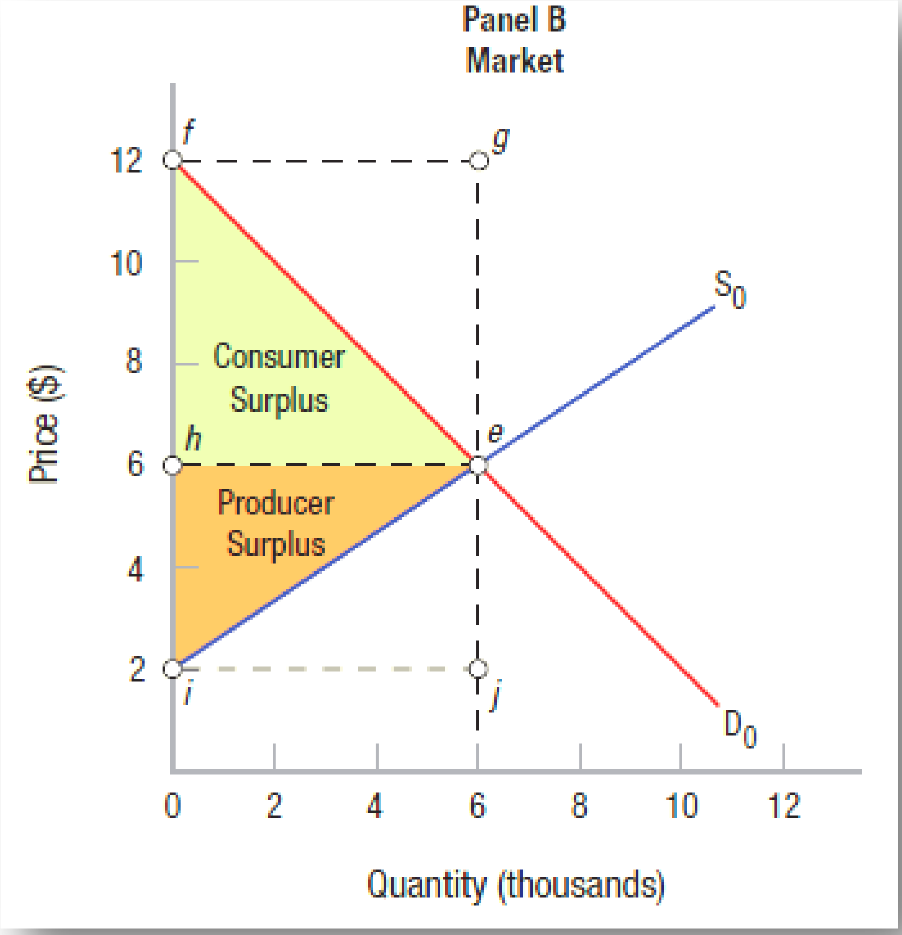
Consumer *"a"* has a *"consumer surplus"* of $5 = ($11 - $6)

And so on…..

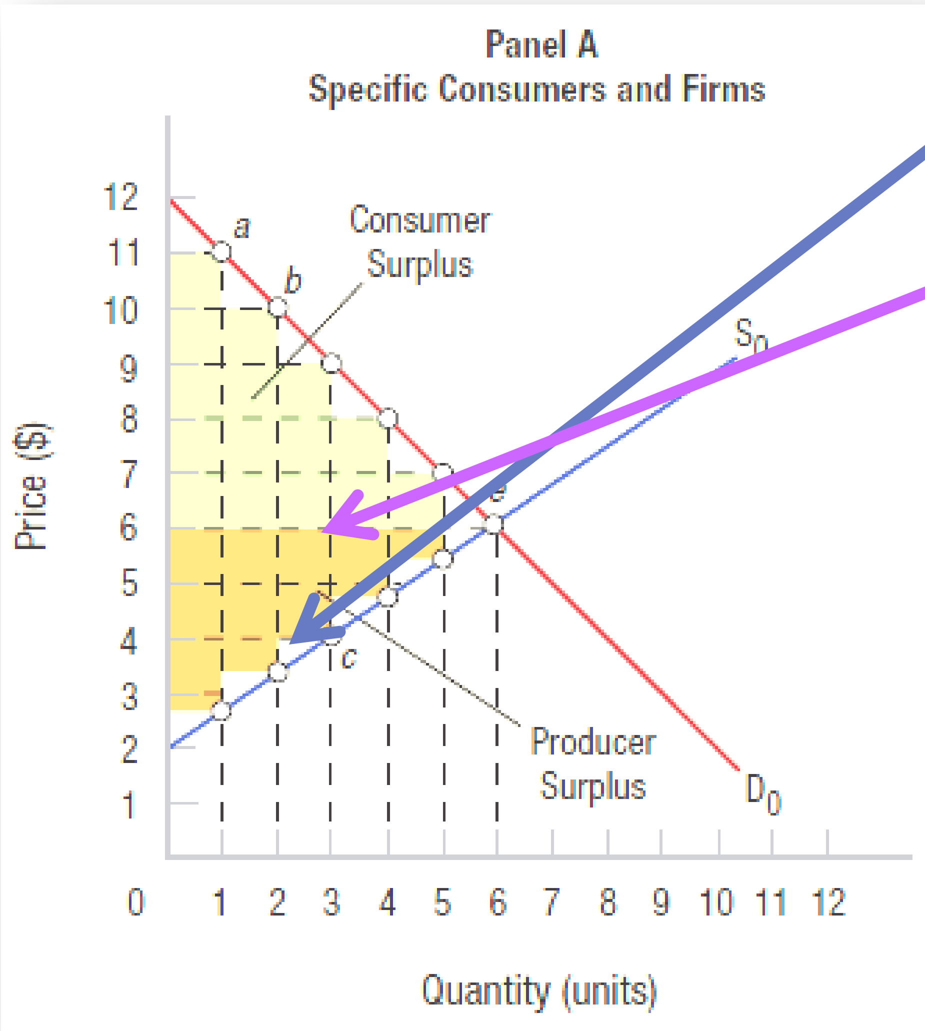
Total Consumer Surplus

Total Market Consumer Surplus is:

- **The sum of all individual consumer surpluses**
- **The area *UNDER the demand curve and ABOVE the market price***



Individual Producer Surplus



Producer ***"c"*** is willing to accept as little as $4 each to supply the third unit

But gets to collect $6 (market price = $6)

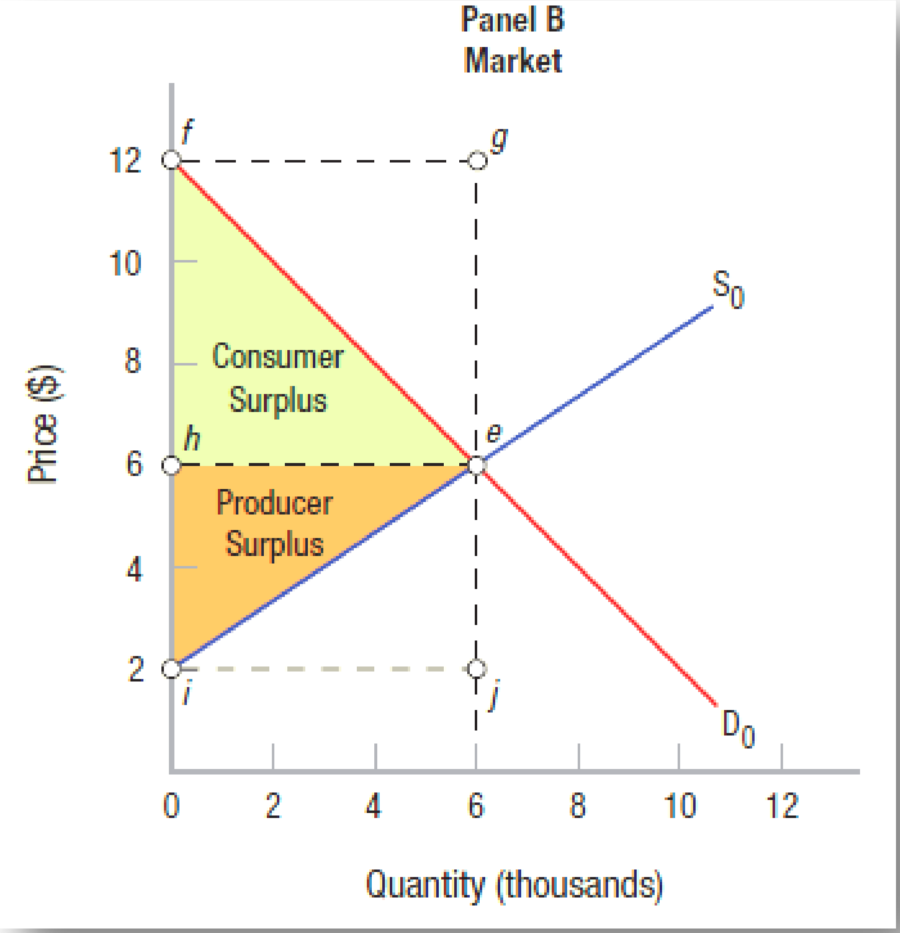
Producer *"c"* has a *"producer surplus"* of $2 = ($6 - $4)

And so on….

Total Producer Surplus

Total Market Producer Surplus is:

- **The sum of all individual producer surpluses**
- **The area *UNDER the market price and ABOVE the supply curve***



Market Failures

Markets are usually efficient…but not always.

Market failure happens when a market fails to provide the socially optimal amount of goods and services.

Sources of Market Failure

Markets fail for three main reasons:

- **Asymmetric information**
- **Problems with property rights**
- **There are significant external costs or benefits**

Asymmetric Information

***Asymmetric information*: occurs when one party to a transaction knows more than the other.**

Examples: Job Market

Asymmetric Information

Asymmetric information creates two types of market failure:

- **Adverse Selection**
- **Moral Hazard**

Asymmetric Information

***Adverse selection*: occurs when products of different qualities are sold at the same price because of asymmetric information.**

Asymmetric Information

- ***Moral hazard:*** **occurs when an insurance policy or some other arrangement changes the economic incentives and leads to a change in behavior.**

Problems with Property Rights

There are two general cases of market failure caused by property right issues:

- **Public goods**
- **Common property resources**

Public Goods

Public goods are:

- non-exclusive
  - Once provided, no one person can be excluded from consuming.
- non-rival
  - One person’s consumption does not diminish others’ benefit.

The Free Rider Problem

Free rider: **When a public good is provided, consumers cannot be excluded from enjoying the product, so some consume the product without paying.**

Example: Public Broadcasting and National Public Radio

-As many as 90% of NPR listeners "free ride"

The Free Rider Problem

- **Since no one can be excluded (regardless of payment) some will choose NOT to pay.**
  - **Problem: society WANTS the good and enjoys its benefits but will not (voluntarily) pay enough for its provision.**
  - **Government must provide the good (and require tax payments) to solve this "market failure."**
    - **On its own, the free market will not provide enough of these goods.**
  - **Examples: national parks, national security**

Common Property Resources

Common property resources:
Resources that are owned by the community at large and therefore tend to be overexploited because individuals have little incentive to use them in a sustainable fashion.

Externalities

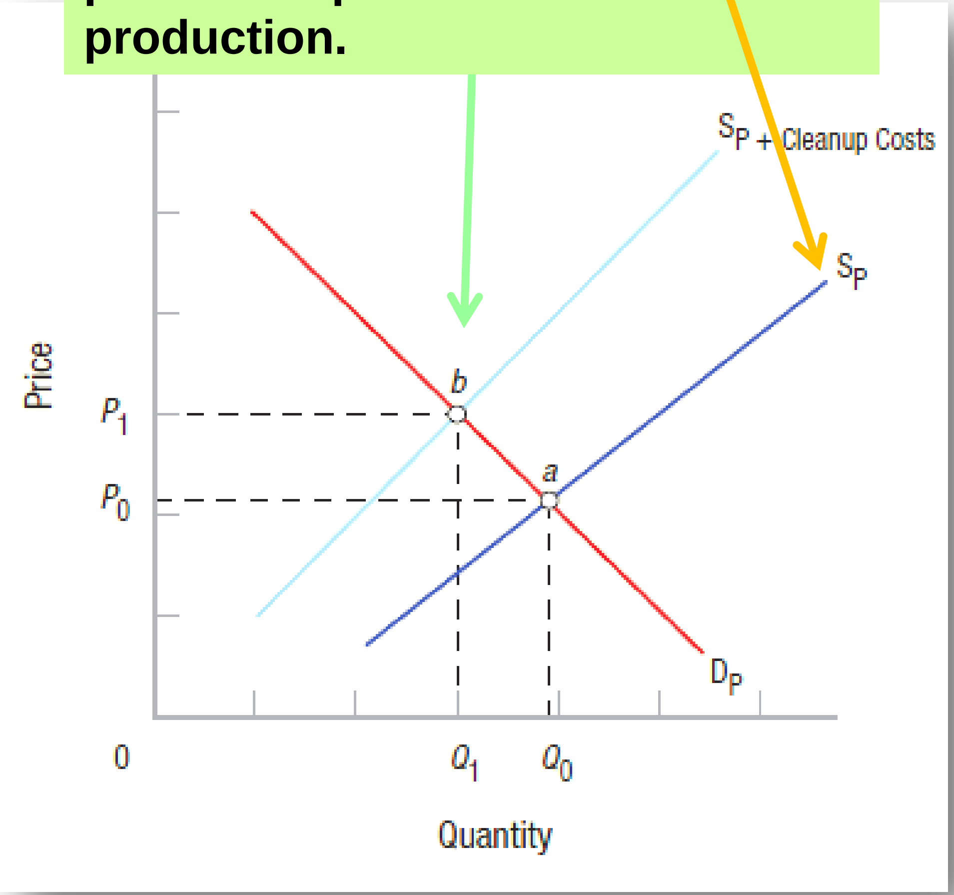
- **When externalities are present, the free market will overproduce or underproduce the good in question.**
- ***External cost*** **(or negative externality): Occurs when a transaction between two parties has an impact on a third party not involved with the transaction.**
- ***External benefits*****: Positive externalities, such as education and vaccinations.**

Markets with External Costs

Example: if a good's production generates pollution, the cost of production is artificially cheap.

Supply would shift left if producers paid the full cost of production.

The good with a negative externality will be overproduced.



Markets with External Benefits

- **External benefits would shift the private demand curve out (right).**