Markets, Efficiency and Welfare

Principles of Micro, Lecture 5

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Welfare Economics

The study of how the allocation of resources affects economic well-being.

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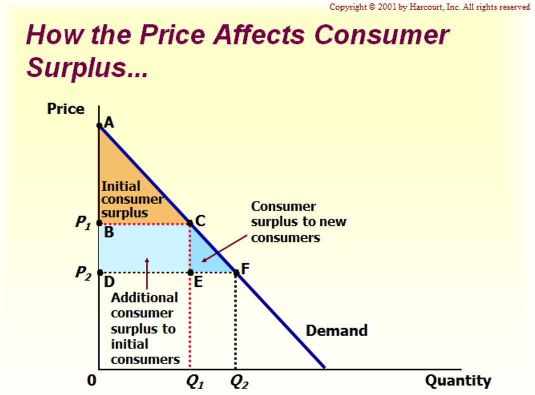
Well-being:

- for consumers: the Consumer Surplus
- for firms: the Producer Surplus

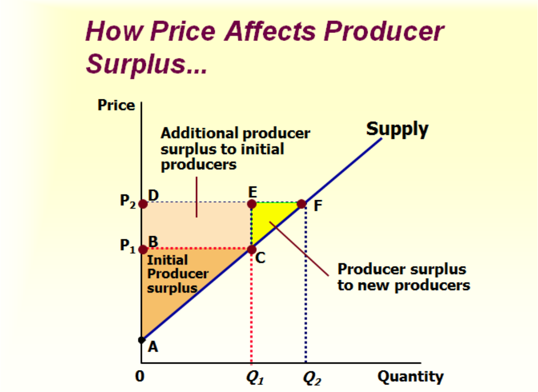
The Consumer Surplus

The net benefit that buyers receive from a purchased good as the buyers themselves perceive it



The Producer Surplus

The net benefit that producers receive from a good they sell on the market



When are Markets Efficient?

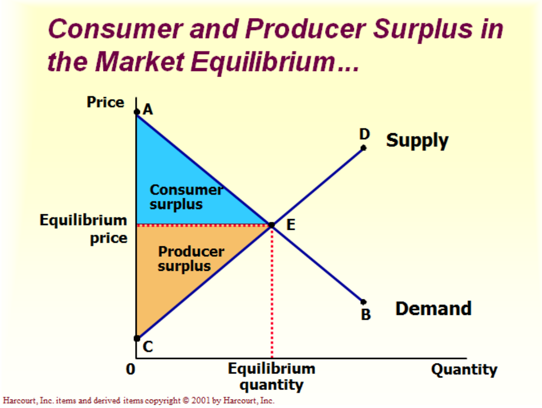
Maximizing total welfare

Market Efficiency

Market efficiency is achieved when the allocation of resources *maximizes* social welfare

Social Welfare

Social Welfare = CS + PS



Welfare is maximized. But is it fairly distributed? Efficiency Vs. Equity debate.

Markets and Social Welfare

A summary

Things to remember:

1. Free markets allocate the supply of goods to the buyers who value them most highly;
2. Free markets allocate the demand for goods to the sellers who can produce them at least cost.
3. Free markets produce the quantity of goods that maximizes social welfare (SW)
4. Despite SW maximization, it could be unfairly distributed among the members of the society. As a result, redistributive policies:
    - price controls
    - taxes
    - subsidies
5. Apart from fairness, two more concerns for efficient allocation arise: market power, and externalities. As a result: government regulation.

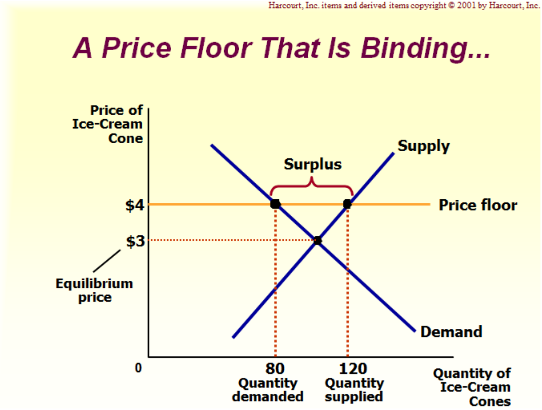
Since markets are efficient but unfair, government steps in.

The roles of economists is to help development of government policies:

1. Price and quantity controls
    - Price floors: minimum wages
    - Price ceilings: gas prices, rent control
    - Quotas: coupons limiting demand, import limits
2. Taxes
    - Specific taxes
    - Ad valorem taxes
3. Subsidies
    - Export subsidies
    - Production subsidies

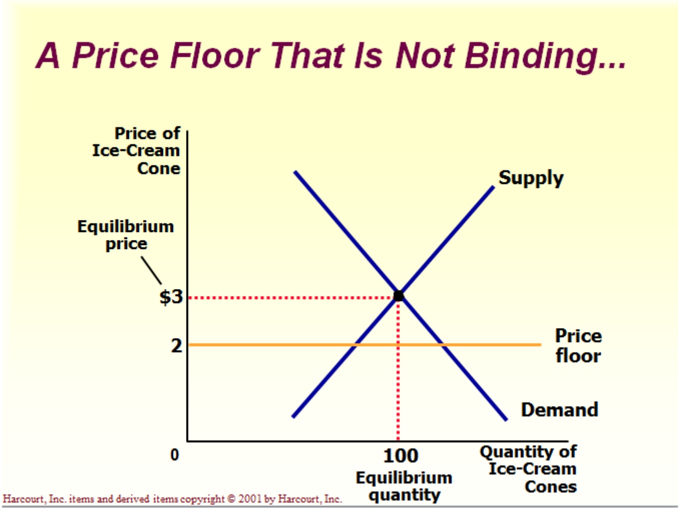
Price Floor

A legally established *minimum* price at which a good can be sold



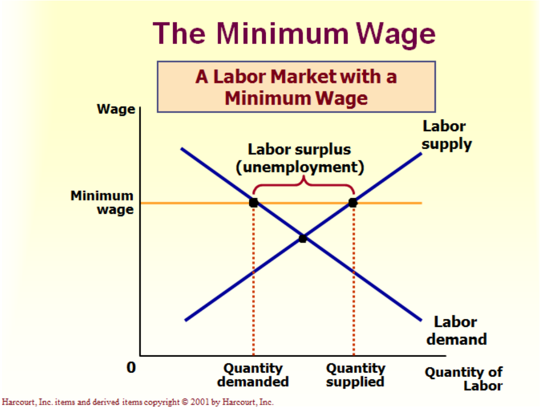
Is the price floor always binding? –> Does it have an effect on equilibrium?

The case when the price floor does not matter



Minimum wage

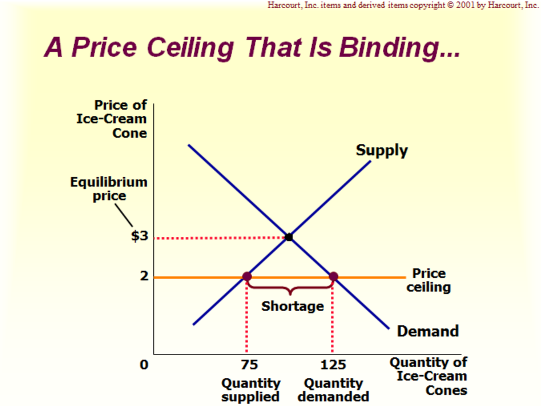
A legally established *minimum* price on the labor market



Does it have an effect on equilibrium?

Price Ceiling

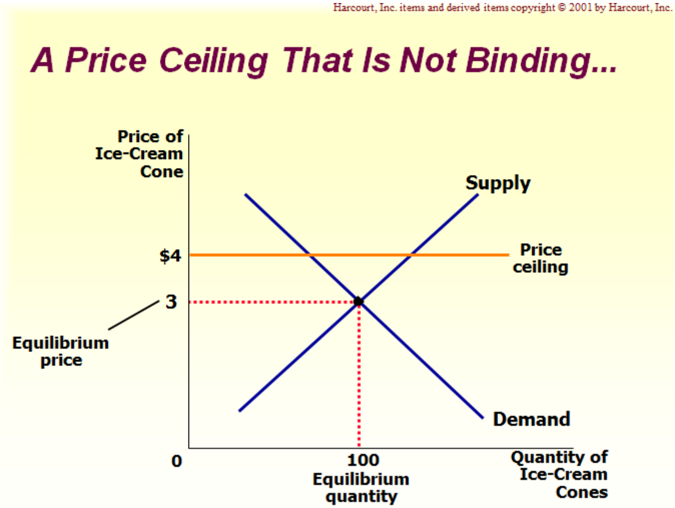
A legally established *maximum* price at which a good can be sold



Is the price ceiling always binding? –> Does it have an effect on equilibrium?

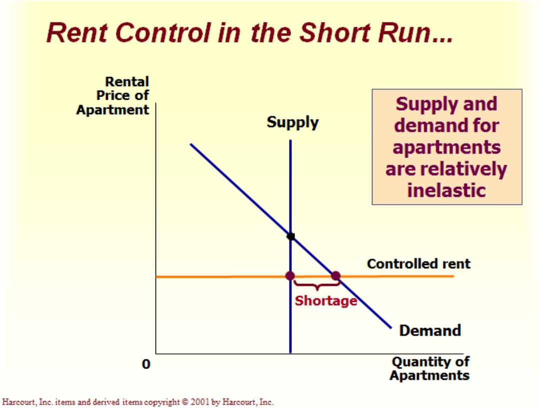
Price Ceilings

The case when the price ceiling does not matter



Rent controls

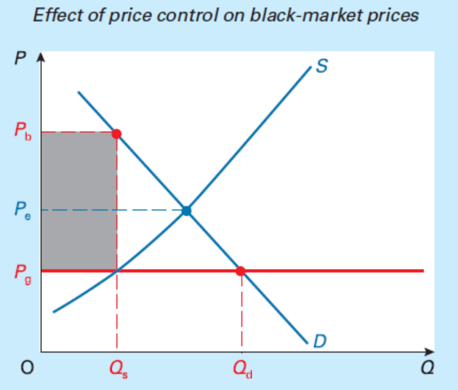
A legally established *maximum* price on the rental market



Does it have an effect on equilibrium?

Black market

A market in which it is illegal to buy or sell in general, or illegal to buy or sell above/below a certain price.



Why is a black market created? Give examples.

Direct tax

A tax levied on income or wealth

Indirect tax

A tax levied on consumption (sale) of a good:

1. Specific tax: a fixed *amount* per unit purchased (10 cents)
2. Ad valorem tax: a fixed *proportion* of the value purchased (10%)

$\Rightarrow$ Buyers pay more and sellers receive less, regardless of whom the tax is levied on.

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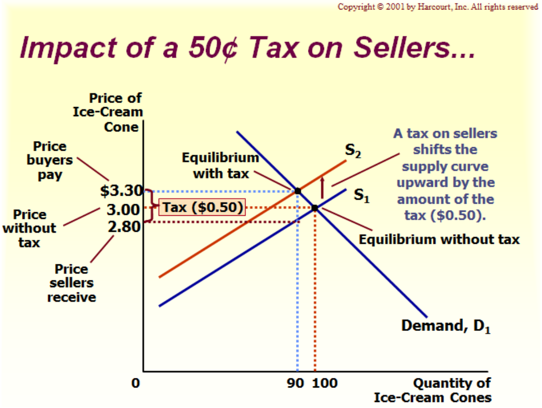
Tax incidence

Tax incidence is the study of who bears the burden of a tax

Effects from taxation

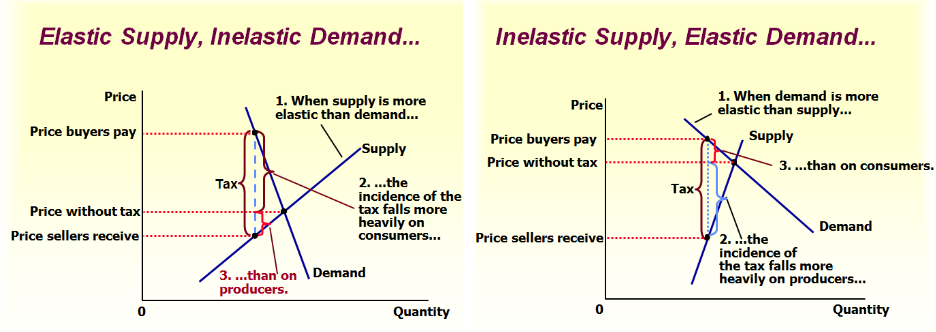
1. Buyers pay more and consume less
2. Sellers get less and produce less
3. Tax revenues increase
4. Dead-weight loss (DWL) from taxation



Who bears the burden of taxation?

Tax incidence

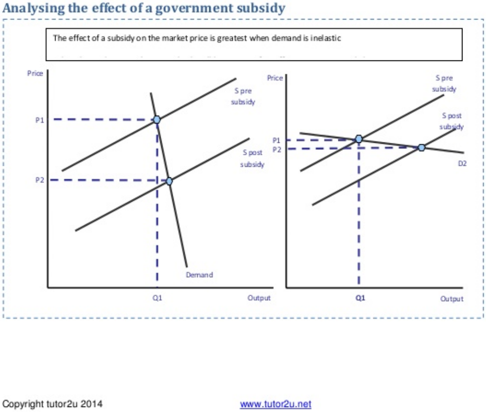
How is the burden distributed?: It all depends on demand and supply elasticities (ε)



$\Rightarrow$ The burden of a tax falls *more heavily* on the side of the market that is *less elastic*.

Subsidy (S)

A payment by the government to either buyers or sellers. If buyers get it, S increases income; if sellers get it, S lower costs.



Who gets the benefit from the subsidy?

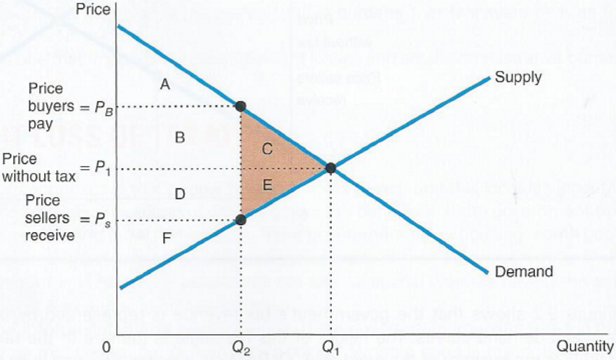
The dead-weight losses of Social Welfare

The effect from taxes on Social Welfare

FIGURE 9.3

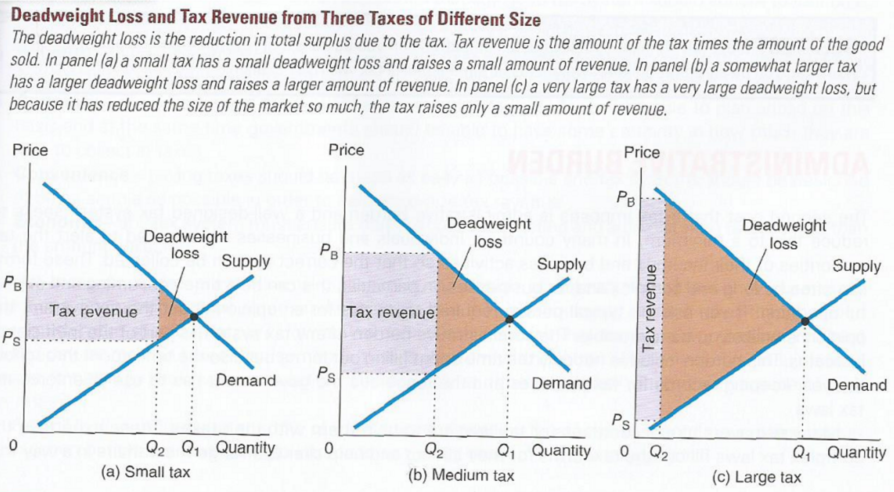
How a Tax Affects Welfare

A tax on a good reduces consumer surplus (by the area B + C) and producer surplus (by the area D + E). Because the fall in producer and consumer surplus exceeds tax revenue (area B + D), the tax is said to impose a deadweight loss (area C + E). The area C + E shows the fall in total surplus and is the deadweight loss of the tax.



	Without tax	With tax	Change
Consumer surplus	A + B + C	A	−(B + C)
Producer surplus	D + E + F	F	−(D + E)
Tax revenue	None	B + D	+(B + D)
Total surplus	A + B + C + D + E + F	A + B + D + F	−(C + E)

The dead-weight losses and tax revenues

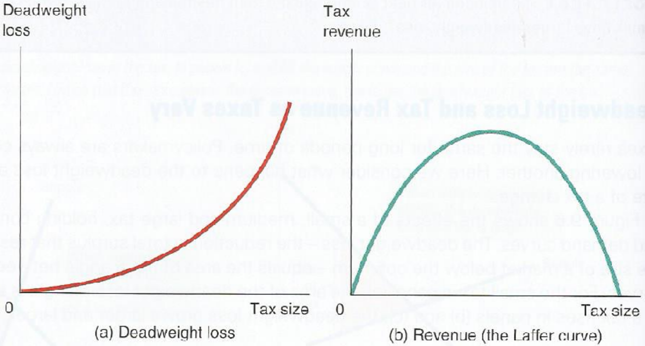


When the tax amount (rate) ↑, DWL ↑.

FIGURE 9.7

How Deadweight Loss and Tax Revenue Vary with the Size of a Tax

Panel (a) shows that, as the size of a tax grows larger, the deadweight loss grows larger. Panel (b) shows that tax revenue first rises, then falls. This relationship is sometimes called the Laffer curve.



Things to remember:

1. Governments intervention is common: price and quantity regulation, taxes, subsidies
2. Taxes are inevitable: G needs to pay for public goods and services
3. Tax incidence depends on demand and supply elasticities
4. Almost any G intervention leads to inefficient market outcomes
   - consumers pay more and consume less
   - producers produce less and receive less
5. Taxes lead to dead-weight losses (DWLs) of Social Welfare
6. There is a positive link between tax rates and DWLs
7. There is an inverted-U link between tax rates and tax revenues, called the Laffer Curve

Further Info

Reading:
M-T, ch.7 (about: Efficiency of markets): 169-186
M-T, ch.8 (about: Government intervention in the marketplace): 187-202
M-T, ch.9 (about: Welfare losses due to taxes, the Laffer Curve): 203-211

Do not miss:
economist.com; wsj.com; cnbc.com