MICROECONOMICS III
CLASS 2

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GOVERNMENT INTERVENTIONS

Variety of ways in which government can affect equilibrium

- Taxes
- Subsidies
- Price controls
- Quotas (quantity controls)
- Tariffs and import quotas

These could be used to fix market imperfections, fund public goods, or serve some other social function

TAX

As a result of taxation, two prices of interest:

- The price the buyer pays – the demand price (PD)
- The price the seller gets – the supply price (PS)

A **quantity tax** – levied per unit of quantity bought/sold, $PD = PS + t$

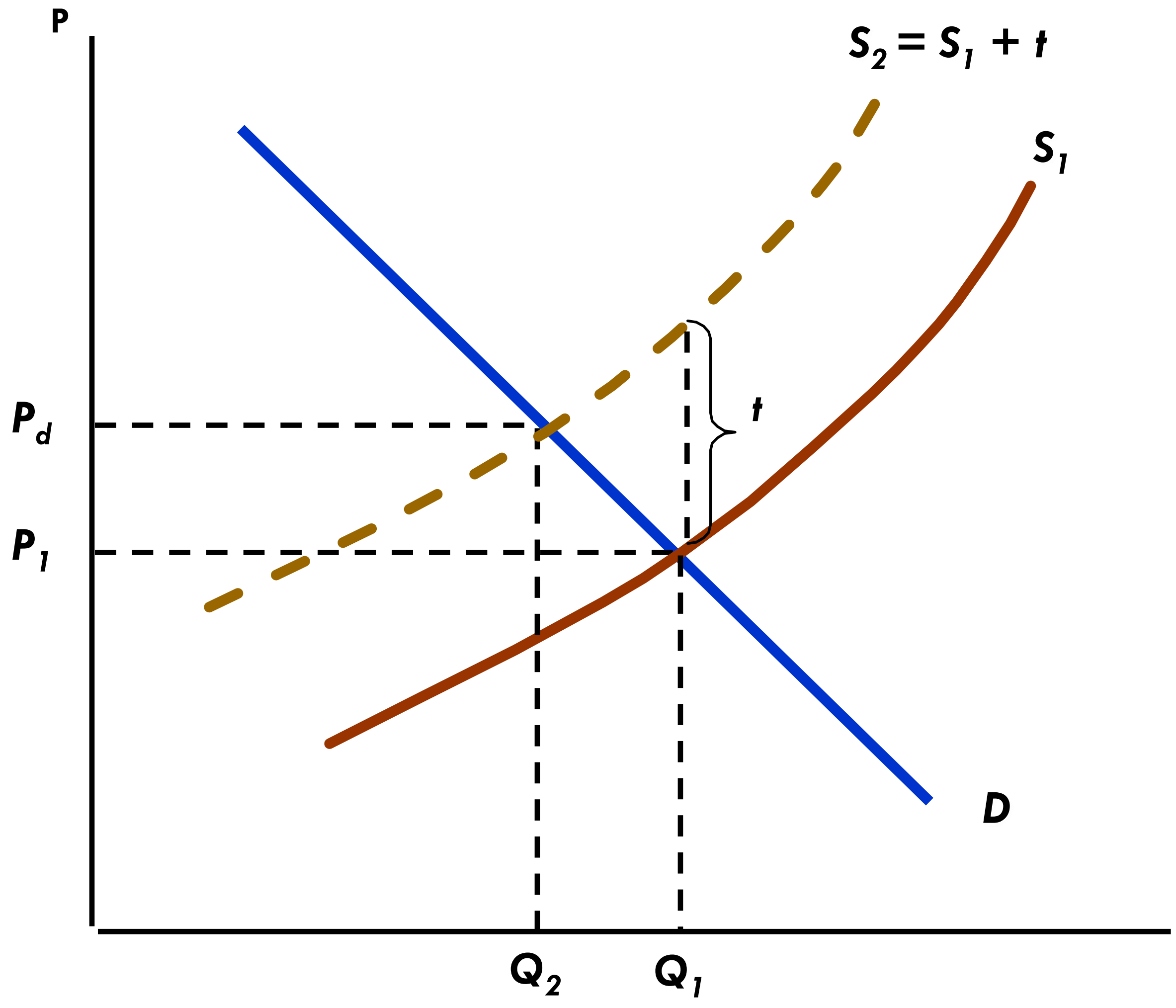
A **value (ad valorem) tax** – expressed in percentage units; $PD = (1 + \tau)\ PS$

A lump-sum tax – a fixed amount, regardless of an individual's behavior such as a choice of a quantity

Equilibrium when $D(PD) = S(PS)$

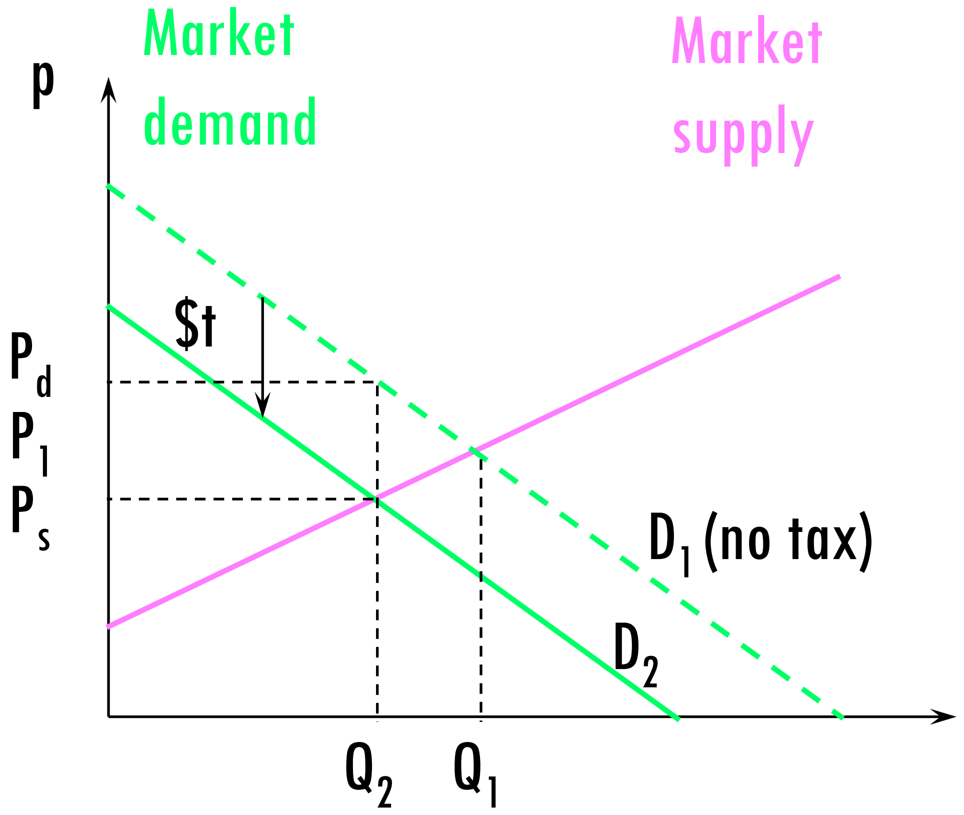
TAX

- Excise tax creates a second (inversed) supply curve, which describes prices that producers would have to sell the product for
- This leads to a lower supply of a good



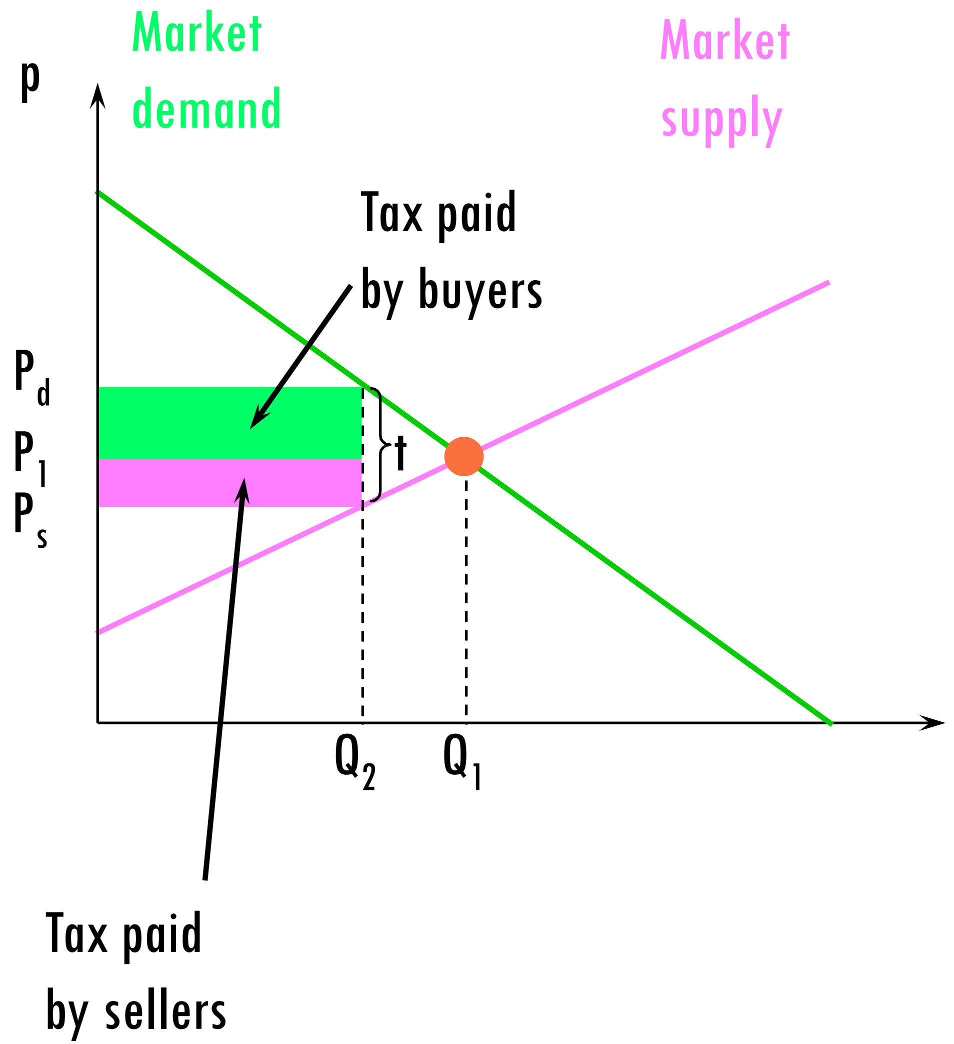
TAX

- Alternatively, you can think about it from the perspective of the producer
- Excise tax creates a second (inversed) demand curve, which describes prices that consumers would have to pay
- For the final outcome, it does not matter how the quantity tax will be represented:
  - As a supply curve shift
  - Or as a demand curve shift



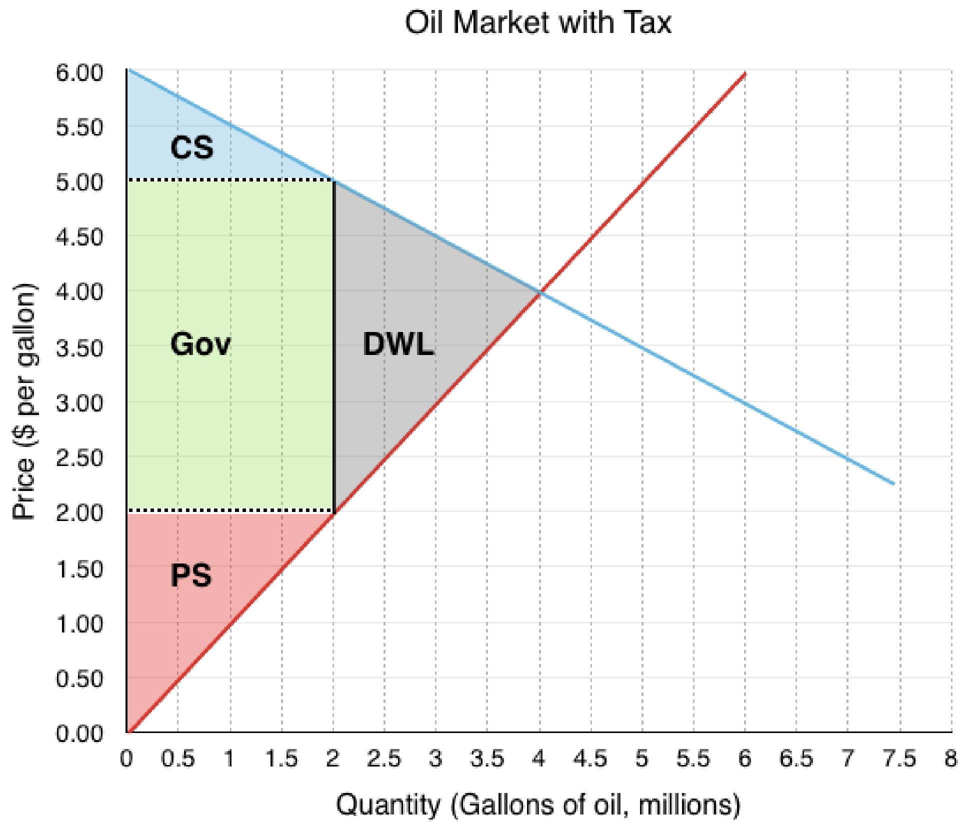
TAX

- Instead of thinking of a tax as being on sellers or on buyers, a tax is rather on transactions between them
- Based on earlier examples, a tax changes the prices for both sellers and buyers
- Shares of the tax paid by sellers and buyers depend on elasticities of supply and demand curves
  - The one relatively more elastic pays less of a tax



TAX

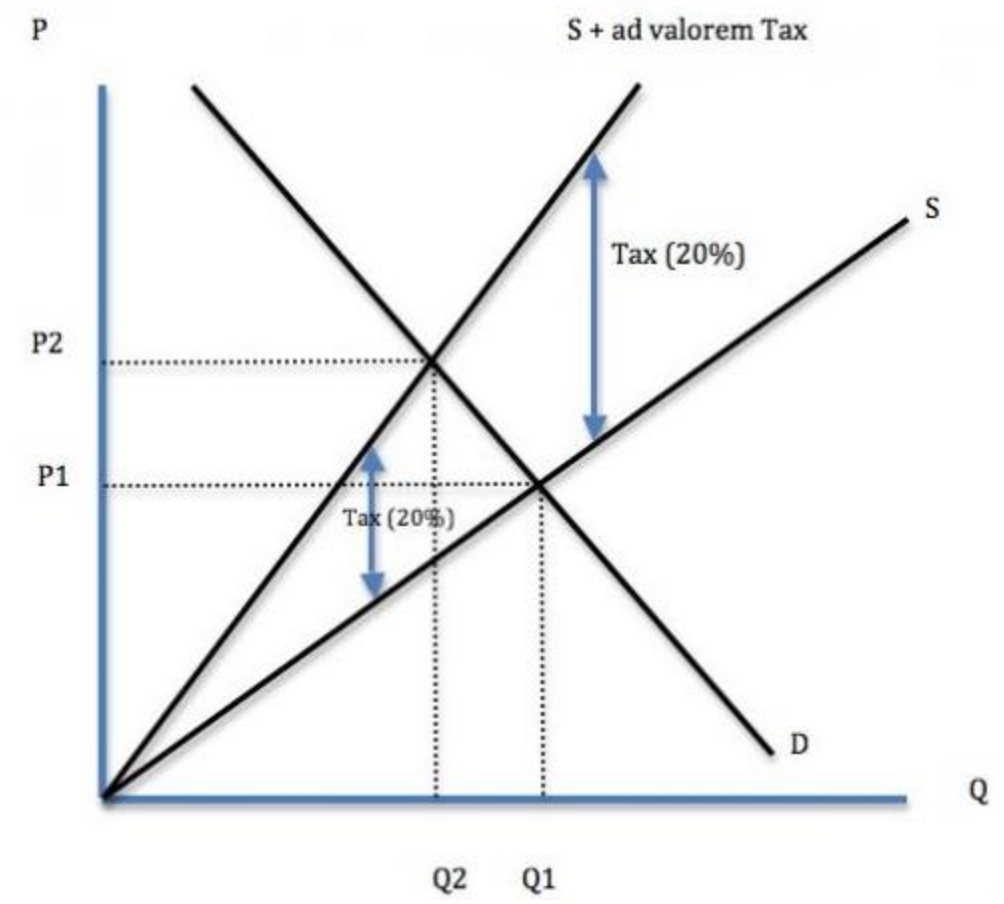
- Tax
  - Reduces both consumer and producer surplus
  - Transfers (some of) the surplus to the government
  - And lowers the total surplus; deadweight loss emerges
- Deadweight loss due to a quantity tax gets smaller as either demand or supply becomes less elastic.



Source: Hutchinson, Emma. 2017. *Principles of Microeconomics*. University of Victoria, Victoria, BC.

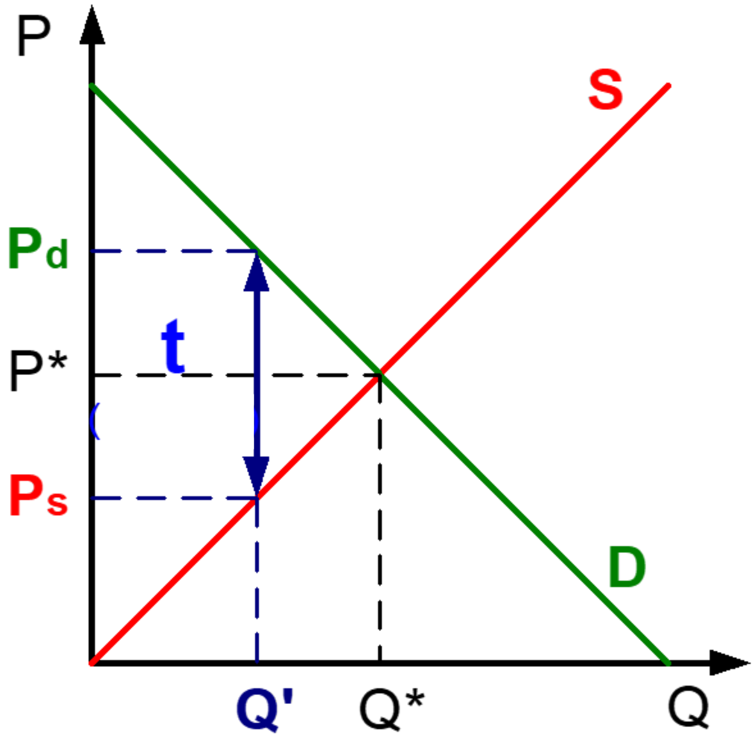
AD VALOREM TAX

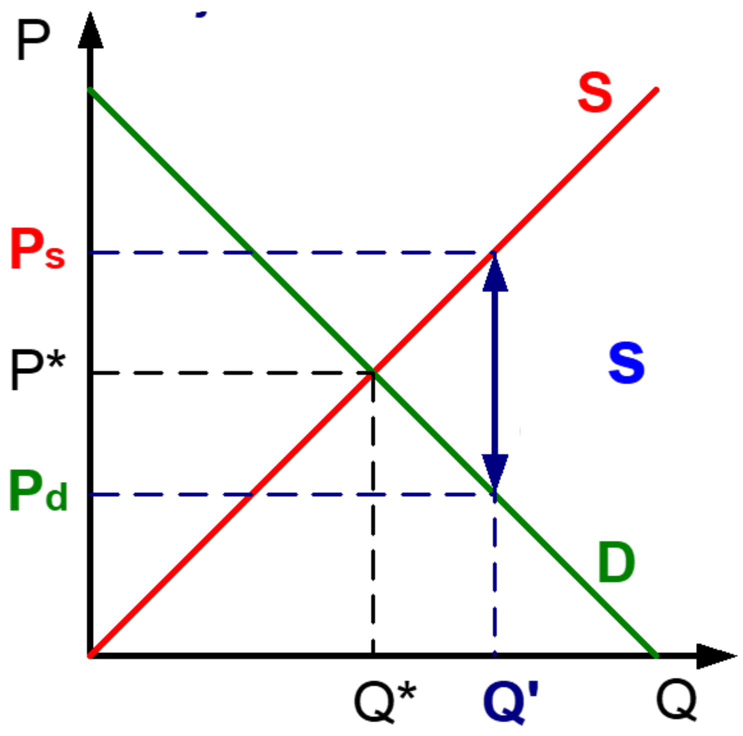
- Ad valorem tax will "rotate" the supply/demand rather than shift them



SUBSIDY

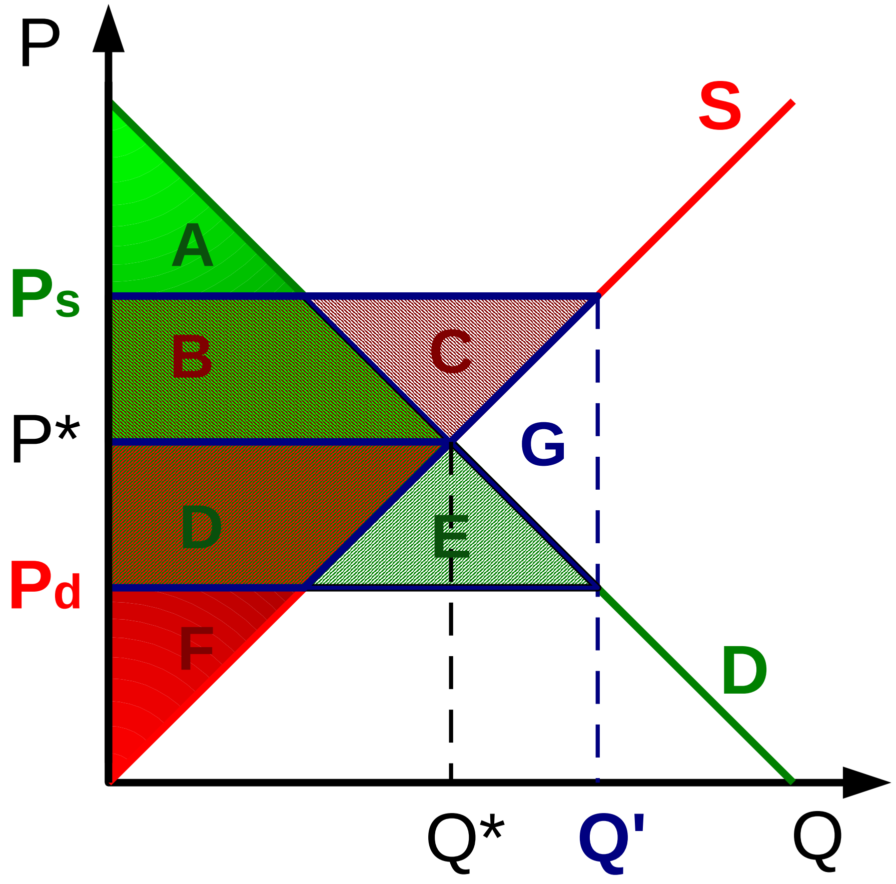
Subsidy works in the opposite direction than tax





SUBSIDY

- A+B – consumer surplus before the introduction of the subsidy
- D+E – a gain in consumer surplus upon the subsidy
- F+D – producer surplus before the introduction of the subsidy
- B+C – a gain in producer surplus upon the subsidy
- Government additionally spends G



PRICE CONTROLS

Government can also affect the market by directly controlling prices

- For example, setting a minimum/maximum price for a product

For example, to tackle price-gauging in the times of a crisis

- Kamala Harris wants to ban price gouging to tackle inflation. Here's how economists rate her plan. - CBS News

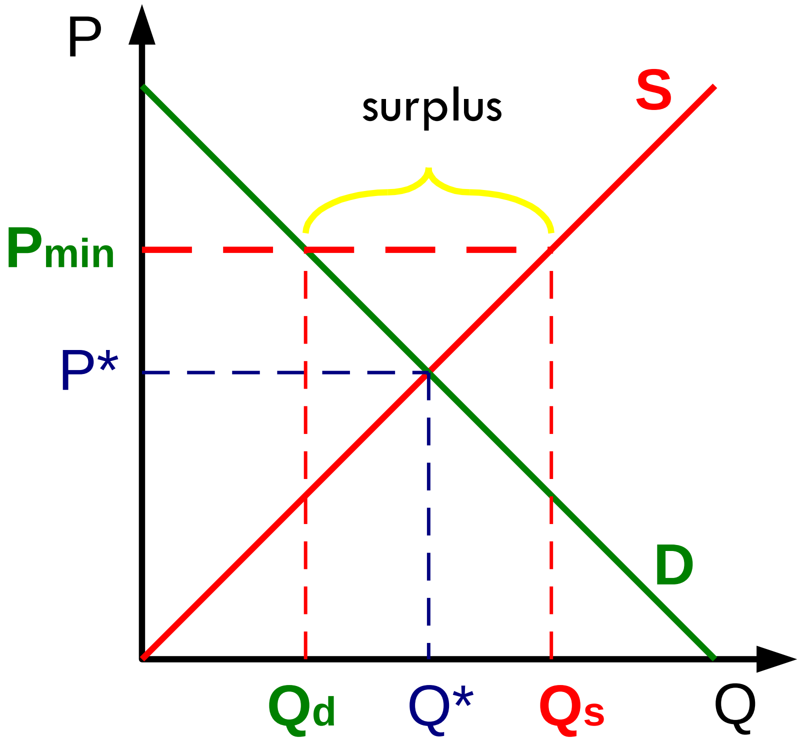
Or to decrease inequality in markets with high asymmetry of power/information

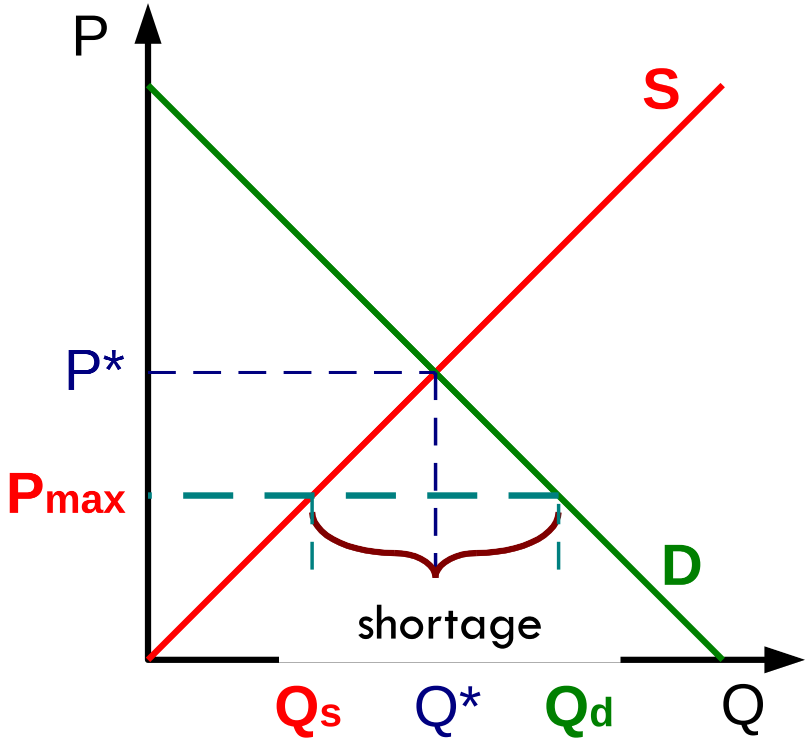
- E.g., healthcare
- https://law.stanford.edu/2015/10/05/daraprim-and-drug-pricing/

Or to protect certain sector of the economy

- E.g., agriculture

PRICE CONTROLS

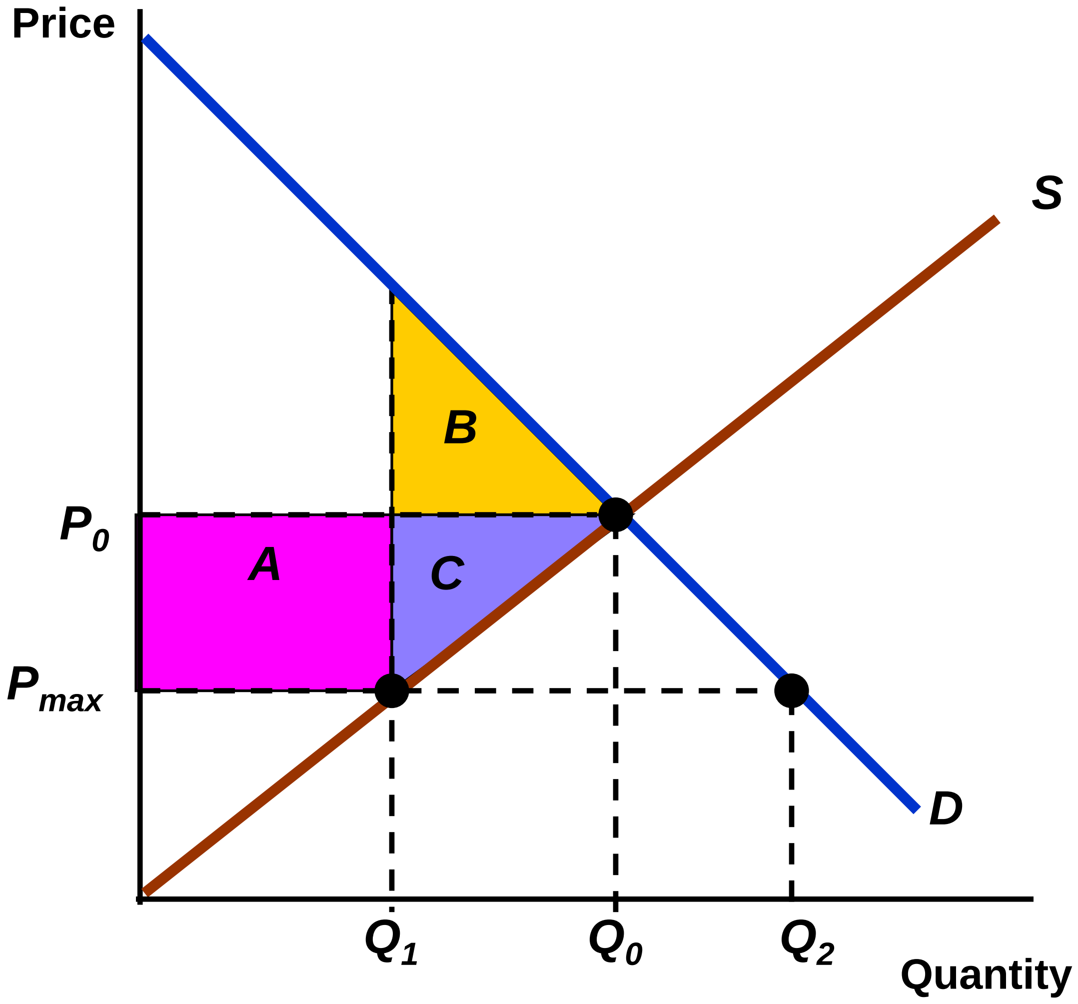




PRICE CONTROLS

With the maximum price

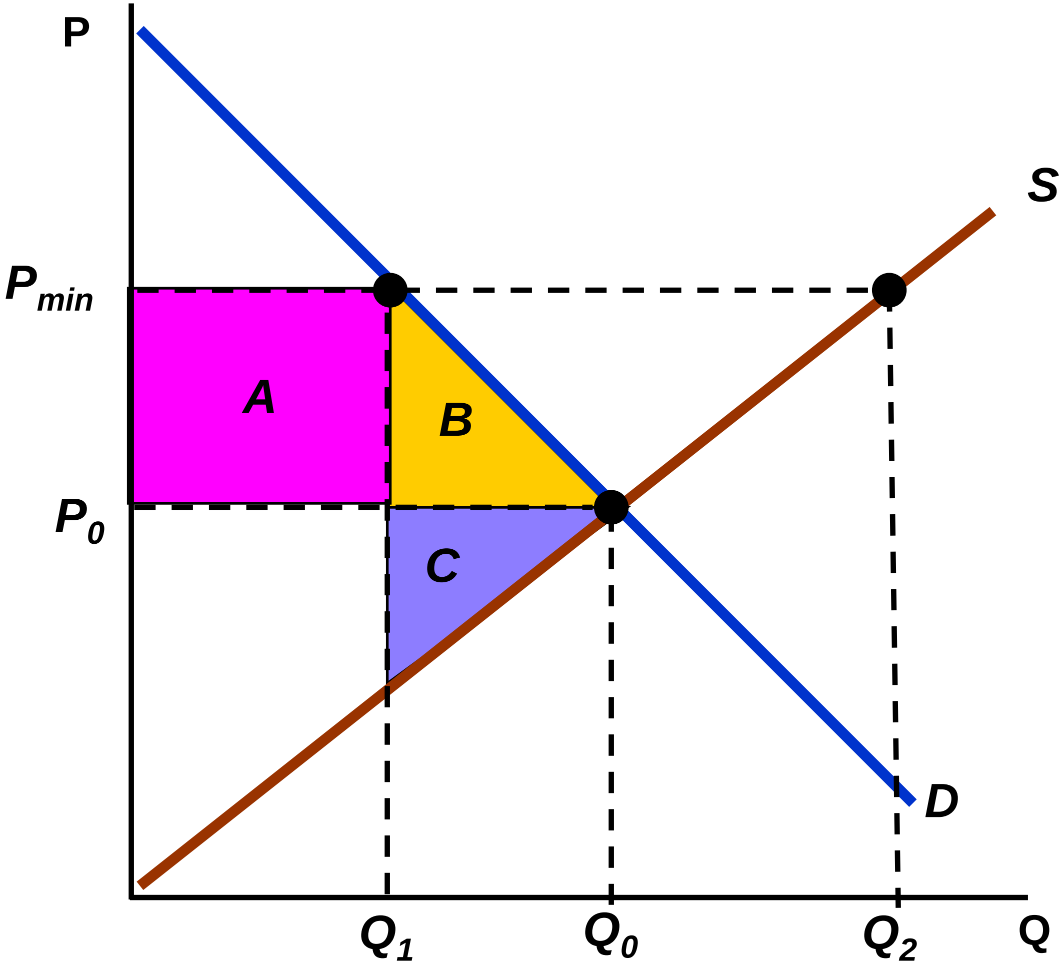
- Consumers gain A, but loose B
  - The net outcome will depend on demand elasticity
- Producers loose A and C
- B and C constitute DWL



PRICE CONTROLS

Analogously, with the minimum price

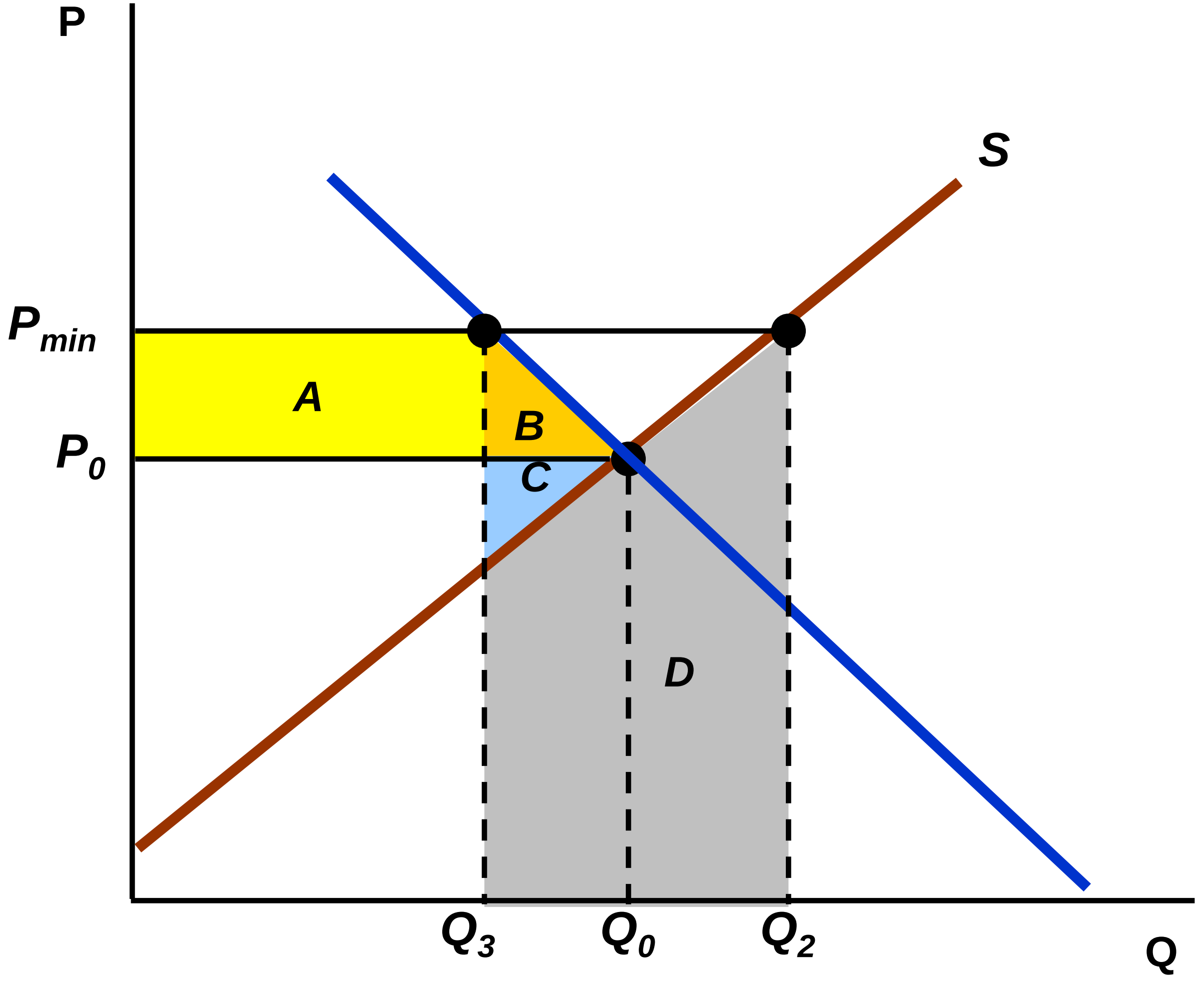
- Producers gain A, but loose C
  - The net outcome will depend on supply elasticity
- Consumers loose A and B
- B and C constitute DWL



PRICE CONTROLS

With minimum prices producers need to also bear the cost of the excess supply

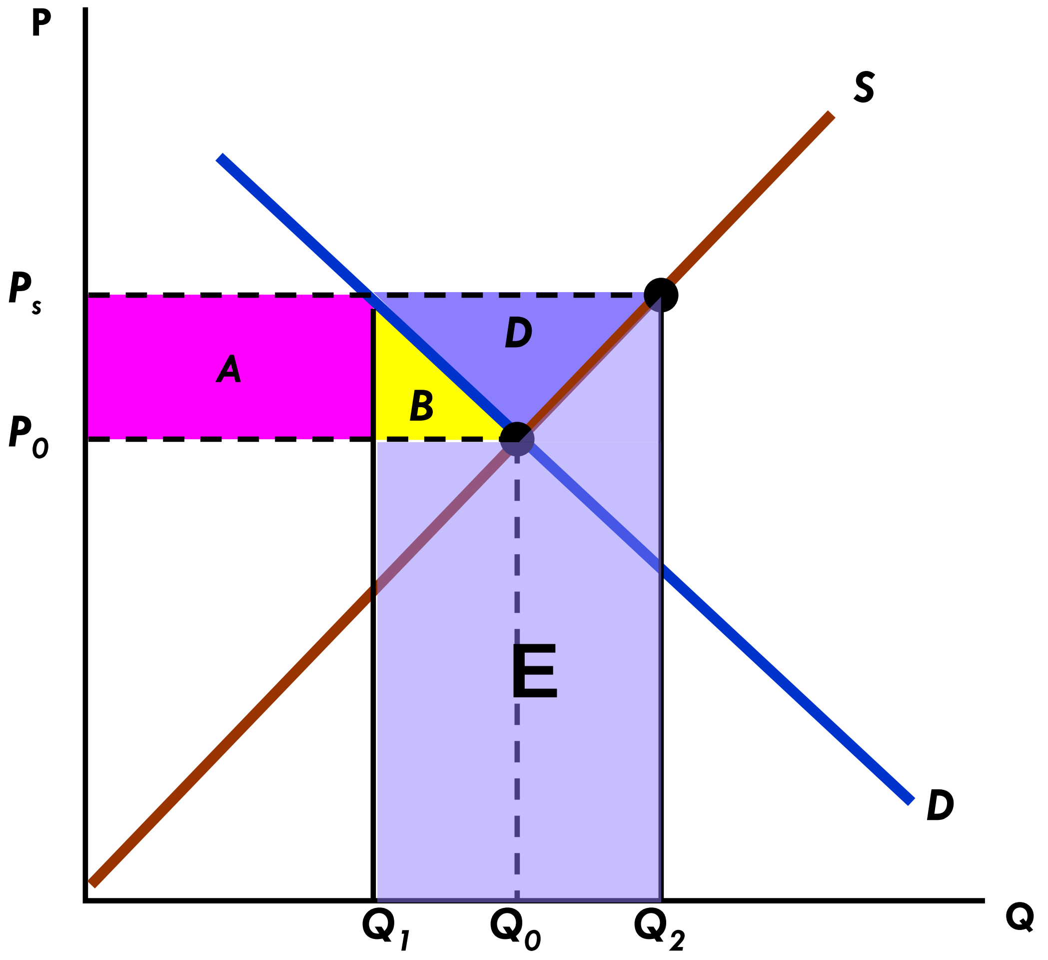
- Produce that hasn't been sold



PRICE CONTROLS

Guaranteed minimum price

- A scheme to pay suppliers a guaranteed minimum price per unit
- A large part of agricultural policies is based on guaranteed prices
- The guaranteed minimum price is set by the government, above the market level, and it is maintained by the government by purchasing the production surplus

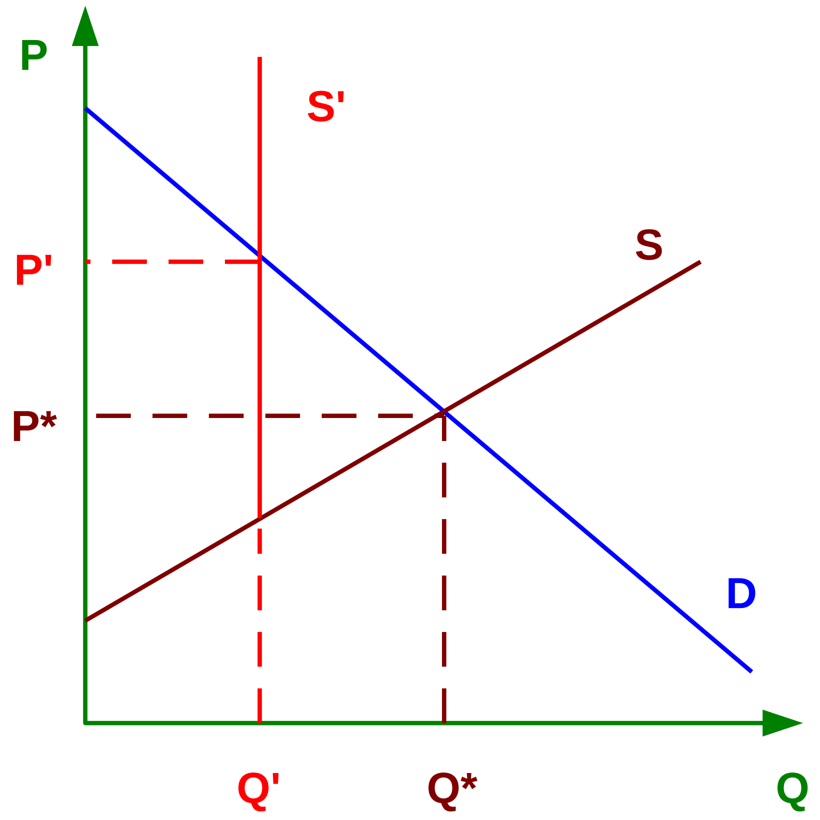


QUOTA CONTROLS

Quota – a policy to reduce quantity by imposing a restriction on a number of goods bought and sold

Examples:

- A limited number of taxi licenses
- A limited number of licenses for selling alcohol



QUOTA CONTROLS