ECON2101

1 Markets

1.1 Market demand & supply

1.1.1 Demand function

Shows quantity demanded by all potential buyers at different prices

$$Q^d = D(p)$$

- Inverse demand: switch variables by rearranging equation
  - p on vertical axis
  - Q^d on horizontal axis

1.1.2 Aggregating demand functions

Given by sum of individual demand functions

$$Q^d = Q^x + Q^y$$

1.1.3 Supply function

Shows quantity supplied by all sellers at different prices

$$Q^s = S(p)$$

- Inverse supply: switch variables by rearranging equation
  - p on vertical axis
  - Q^d on horizontal axis

1.1.4 Market equilibrium

Price at which quantity demanded equals quantity supplied

$$D(p^*) = S(p^*)$$

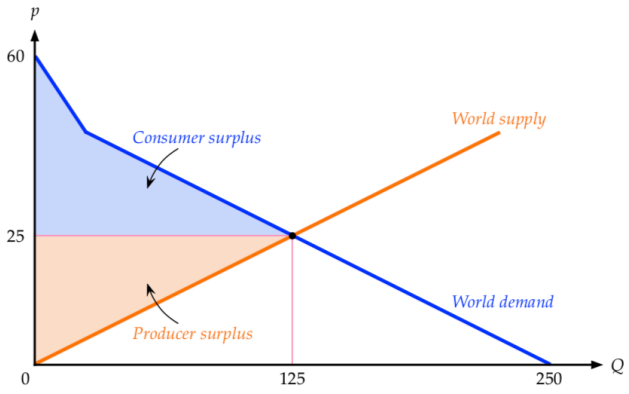
$$Q^* = D(p\ ) = S(p\ )$$

1.1.5 Consumer and producer surplus

Voluntary transactions take place at price between maximum buyer is willing to pay and minimum seller is willing to accept

- Individual consumer surplus: difference between maximum & price paid
- Individual producer surplus: difference between minimum & price received

Total consumer/producer surplus sum of individual surpluses



Market efficiency: consumer surplus + producer surplus

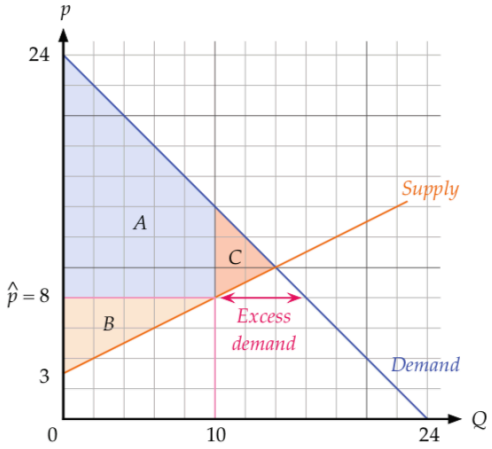
1.2 Market interventions

1.2.1 Price ceilings and floors

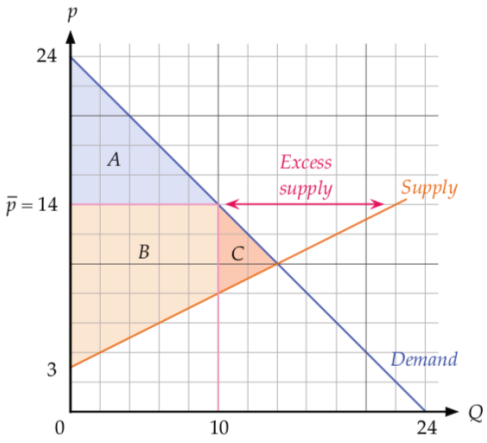
Results in disequilibrium and market inefficiency

- Deadweight loss: decrease in gains from trade

Ceiling



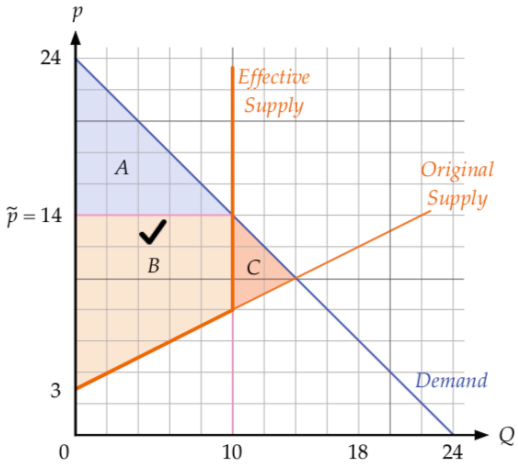
Floor



1.2.2 Quotas

Maximum quantity limit imposed on product

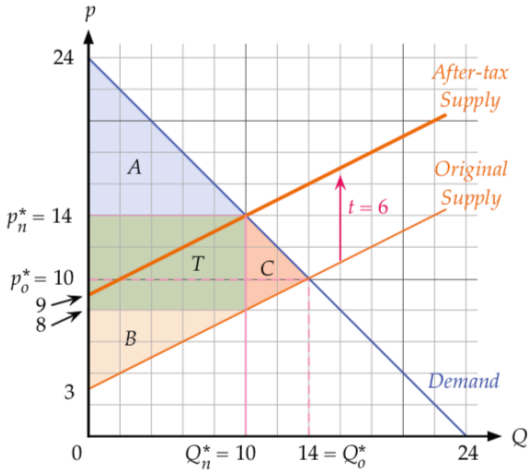
Quota at $Q = 10$



1.2.3 Taxes

Changes intercept (not by tax amount) but not slope

$6 tax on seller



$4 incidence on buyers (extra cost for each buyer)
+ $2 incidence on sellers (reduced price received by each seller)
= $6 tax amount

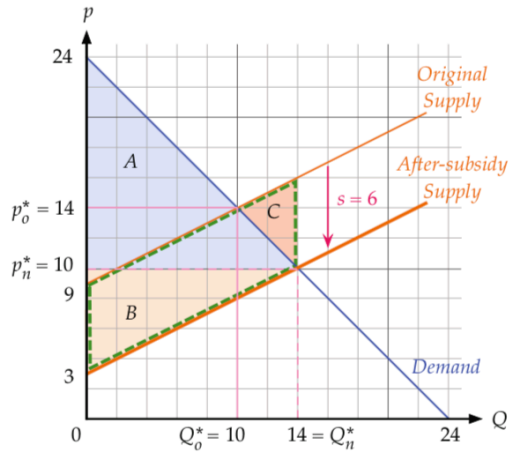
Tax on buyer shifts demand curve down

- New equilibrium quantity, price & incidence of tax is same as tax on seller

1.2.4 Subsidies

Government pays individual buyer/seller

$6 subsidy for seller



$4 incidence on buyers (reduced cost for each buyer)
+ $2 incidence on seller (increased price received by each seller)
= $6 subsidy amount