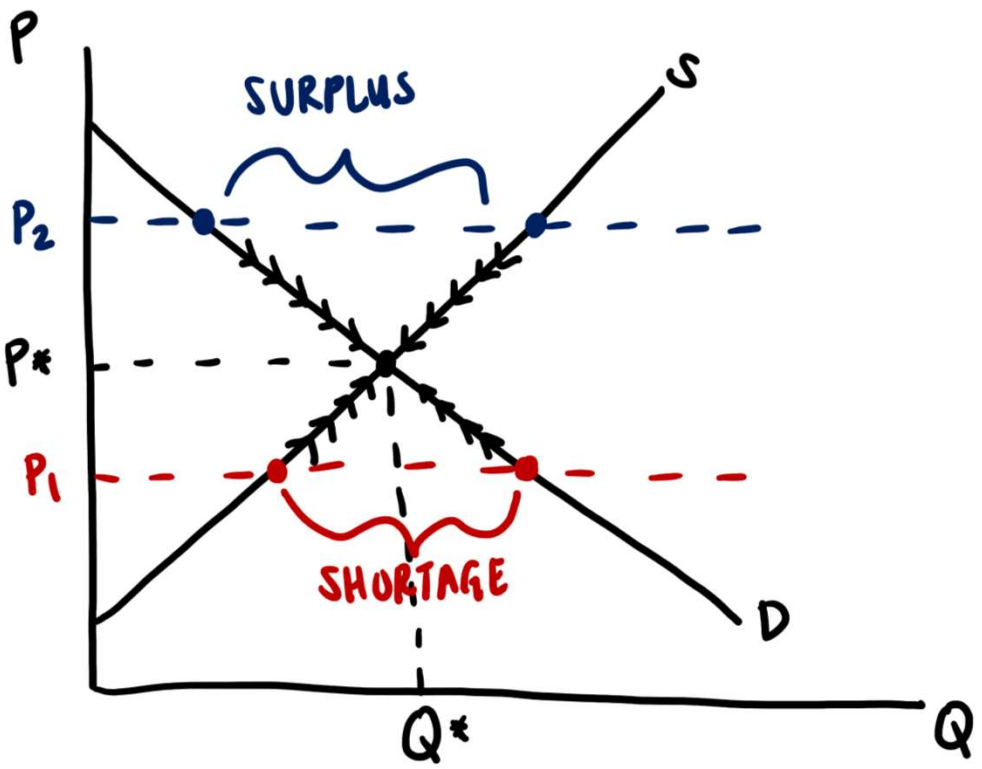
Unit 2
Competitive Markets and Efficiency (Chs. 2 & 3)
10/28

ECON 323 – MICROECONOMIC THEORY – DR. STRICKLAND

Market Equilibrium

At the **competitive market equilibrium:**

- Quantity demanded = quantity supplied
- No incentives to change behavior



LOWER PRICE P_1: $Q_D > Q_S$

SHORTAGE / EXCESS DEMAND

BUYERS BID UP PRICE & SELLERS ↑ P

HIGHER PRICE P_2: $Q_D < Q_S$

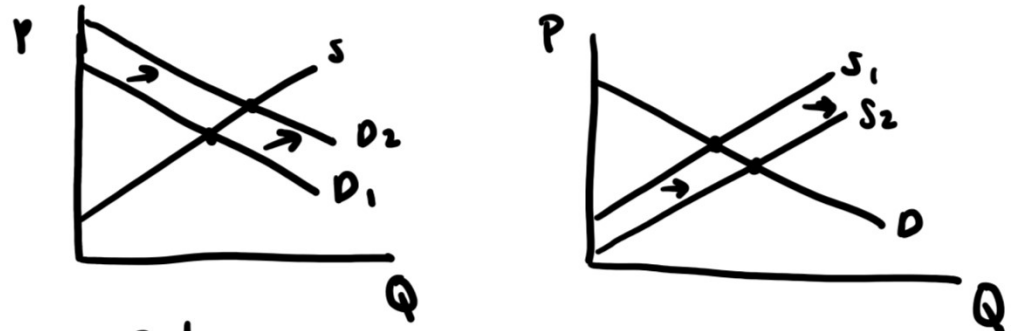
SURPLUS / EXCESS SUPPLY

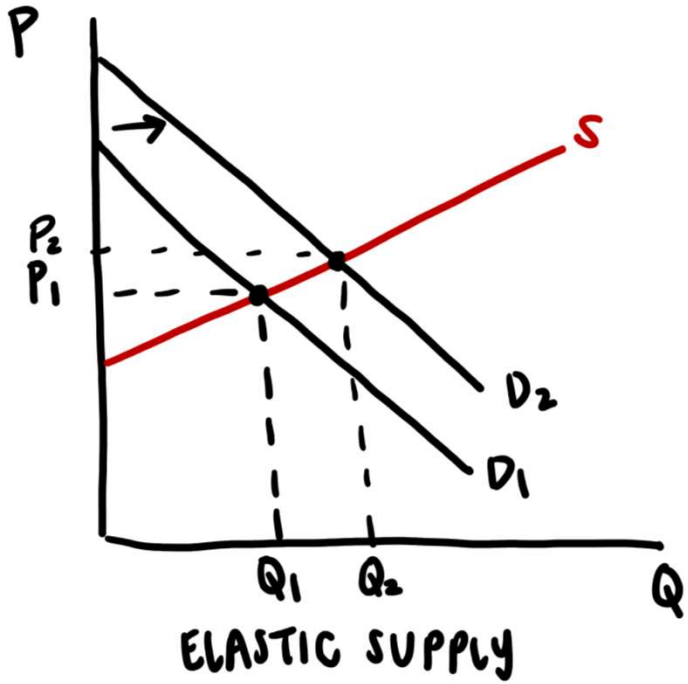
SELLERS ↓ P

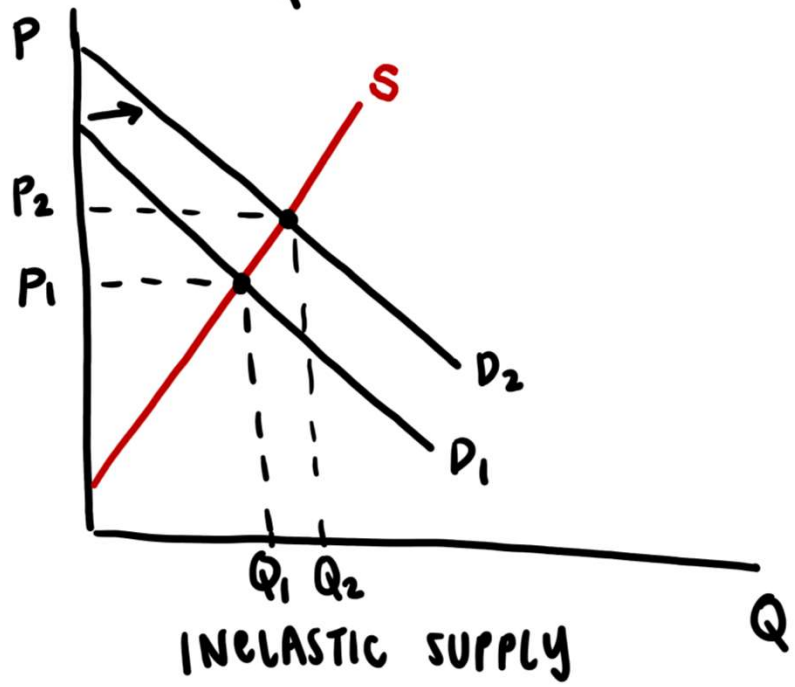
Changes in Market Equilibrium

If demand or supply shifts, how big is the change in market equilibrium?

- How **large** were the shifts?
- How **elastic** are the curves?





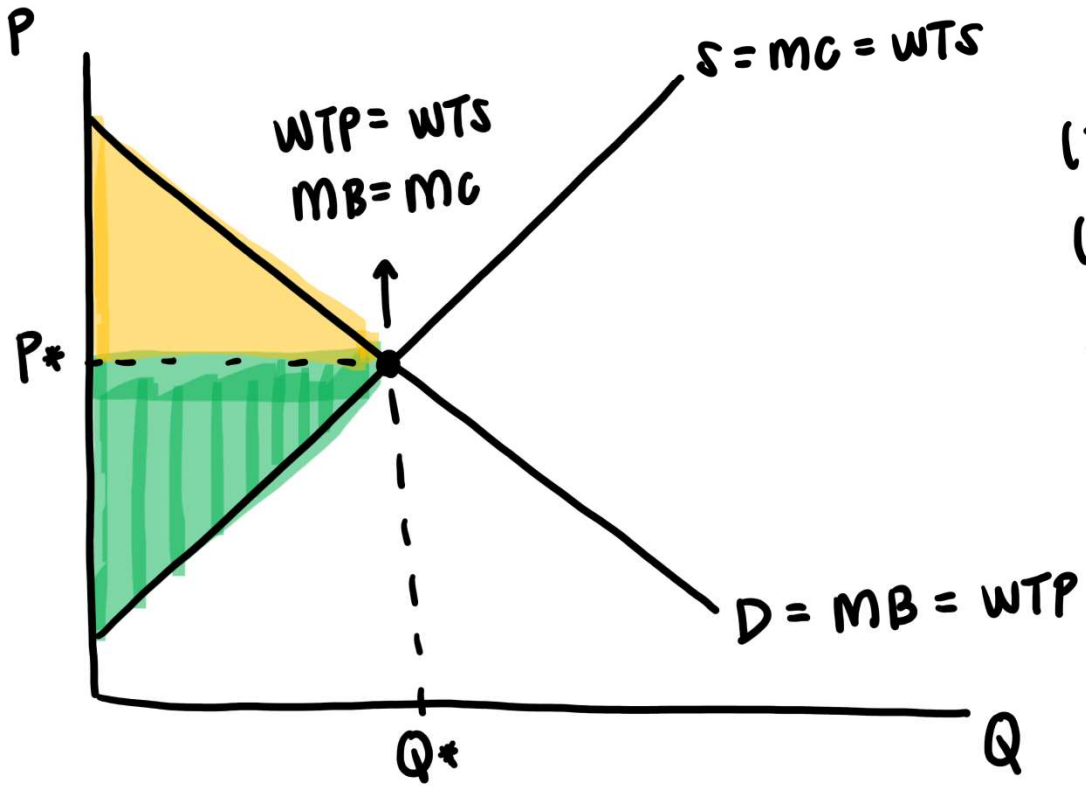


Efficiency of Competitive Markets

Competitive markets maximize social **welfare** (or **total surplus**)

- **Allocative efficiency**

TS = CS + PS
PS = P* - WTS
CS = WTP - P*



(TOTAL) PS =

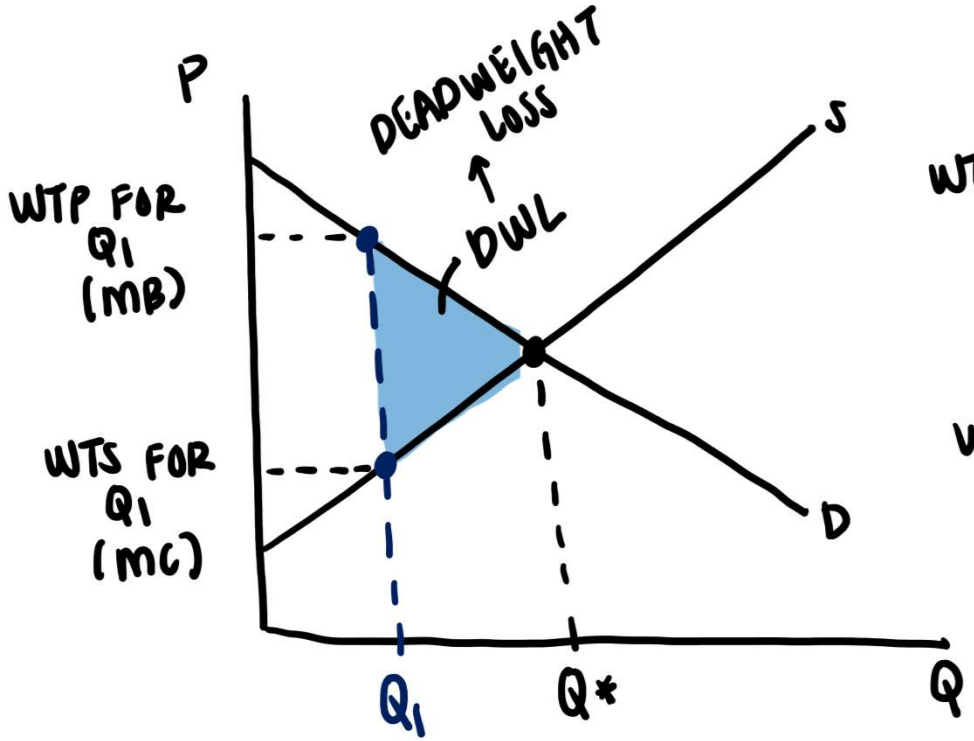
(TOTAL) CS =

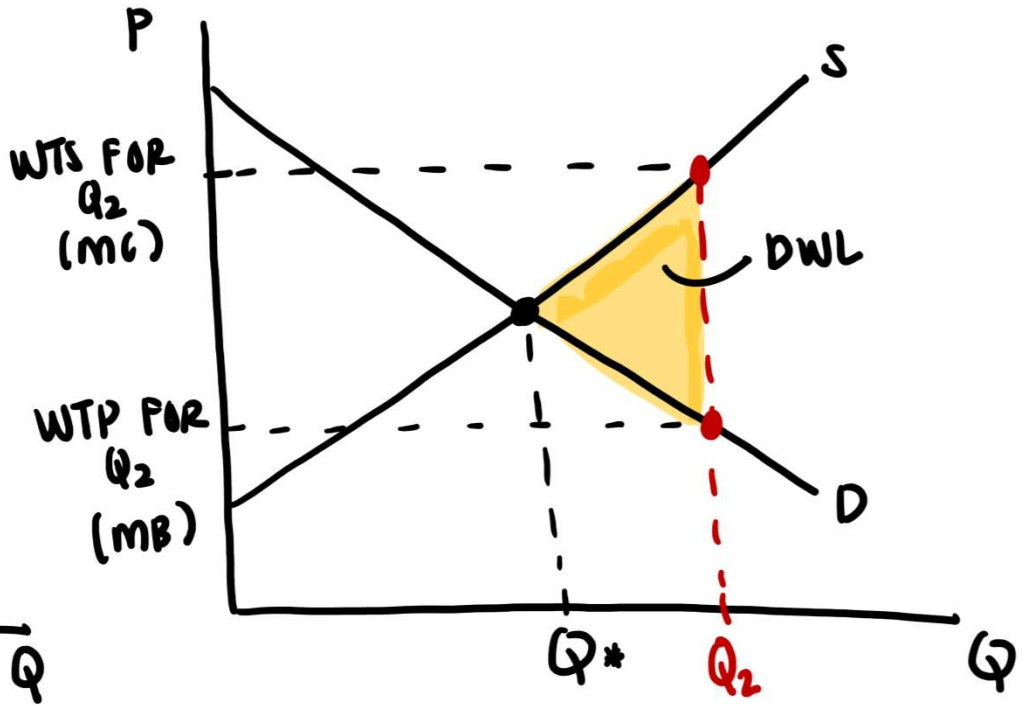
TOTAL SURPLUS (TS) (SOCIAL WELFARE)
=

Efficiency of Competitive Markets

Competitive markets maximize social **welfare** (or **total surplus**)

- **No unexploited gains from trade**
- **No wasted resources**





Some Causes of Market Failure

What causes markets to produce **too little**?

- Price ceilings and floors*
- Quotas (restricting output)*
- Taxes
- Market power

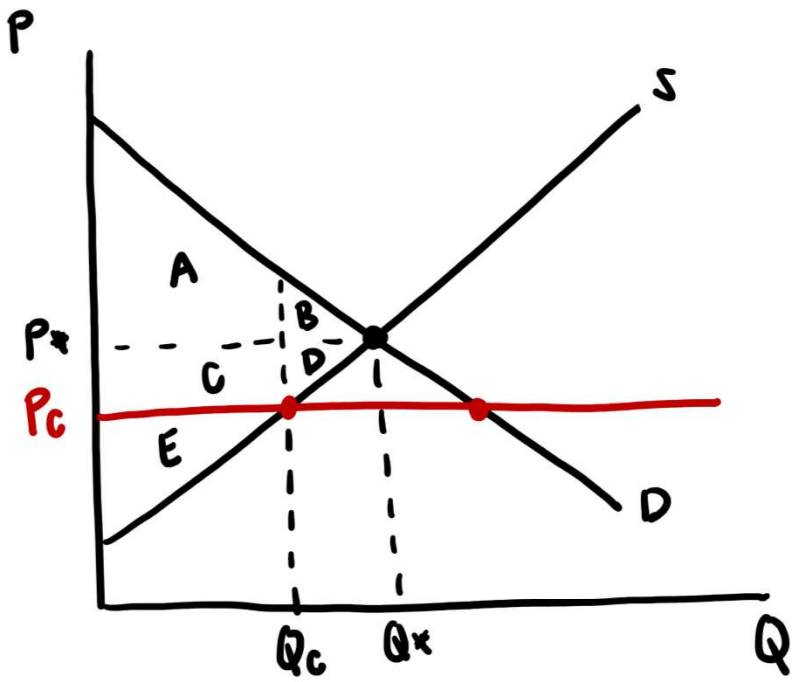
What causes markets to produce **too much**?

- Subsidies

**These regulations are fair game for exam 2.*

Price Ceilings and Floors

PRICE CEILING

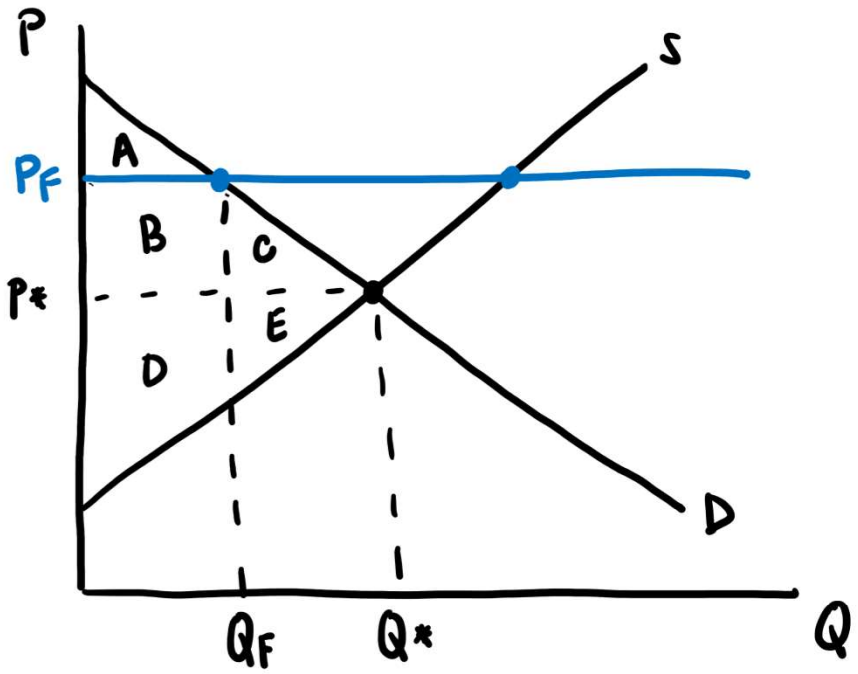


P*, Q*: CS = A + B ; PS = C + D + E

Pc, Qc: CS = A + C ; PS = E

DWL = B + D TRANSFER = C

PRICE FLOOR



P*, Q*: CS = A + B + C ; PS = D + E

PF, QF: CS = A ; PS = B + D

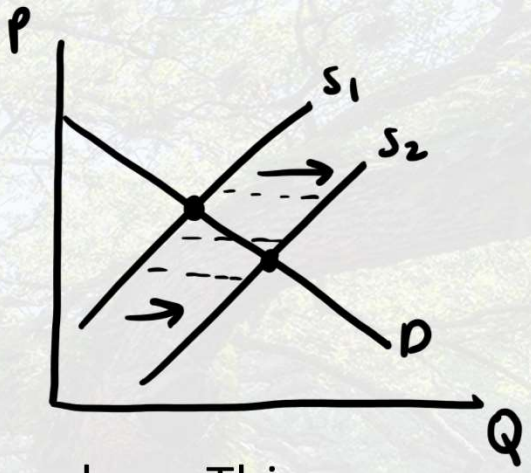
DWL = C + E TRANSFER = B

Let's practice!

Suppose the demand and supply for wands is:

- $Q^D = 2{,}800 - 25P$
- $Q^S = 15P - 400$

In equilibrium, 800 wands are sold for 80 sickles each.



Suppose a new spell is discovered to make wands easier to produce. This increases quantity supplied by 200 at any given price.

a. What is the new supply curve?

$$Q^S_{new} = Q^S + 200$$
$$= (15P - 400) + 200$$
$$= \boxed{15P - 200}$$

Let's practice!

b. What is the new market equilibrium?

$Q_D = 2800 - 25P$ $Q_S = 15P - 400$ FROM (a) $Q^S_{new} = 15P - 200$

$Q_D = Q^S_{new}$

$2800 - 25P = 15P - 200$

$40P = 3000$

$\boxed{P^* = 75}$

$Q^* = 15(75) - 200 = \boxed{925}$

Let's practice!

c. Calculate consumer and producer surplus at the new equilibrium.