Module 7: Welfare & Efficiency

positive analysis := what is happening ; objective

normative analysis := what SHOULD happen ; subjective

efficiency criterion := favor the outcome that yields the most economic surplus

↳ total benefit − total cost

- more economic surplus => more efficient
- most efficient outcome yields most economic surplus

pareto efficient := outcome s.t. no one can be made better off w/o someone being made worse off

pareto improvement := a change that makes at least one person better off w/o making anyone worse off

} pareto efficiency => there exist NO pareto improvement

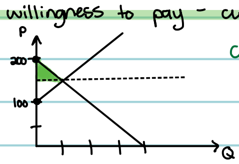
Consumer surplus := willingness to pay − current market price = MB − P

EX: $P = 200 - Q^D$

$P = 50 + Q^S$

$200 - Q = 50 + Q$

$2Q = 150 \rightarrow Q = 75 \rightarrow P = 125$



$CS = \frac{1}{2}$(reservation price − eq price)(eq quantity)

$= \frac{1}{2}(200-150)(75) = \frac{1}{2}(50)(75) = \$1875$

producer surplus := difference between current market price & marginal cost of production = P − MC

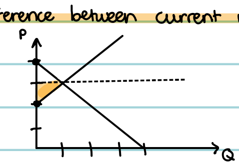
↳ = lowest price a firm is willing to sell for

EX: $P = 200 - Q^D$

$P = 50 + Q^S$

$200 - Q = 50 + Q$

$2Q = 150 \rightarrow Q = 75 \rightarrow P = 125$



$PS = \frac{1}{2}$(eq price − reservation price)(eq quantity)

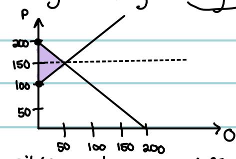
$= \frac{1}{2}(150-100)(75) = \$1875$

voluntary exchange := buyers & sellers exchange money for goods only if they both want to

only if they both experience gains from trade

economic surplus = CS + PS

= MB − P + P − MC = MB − MC



The rational rule for markets : MB = MC

efficient production := producing given Q at lowest possible cost... requires allocating production to lowest MC firm

efficient allocation := allocating given Q to maximize marginal benefit

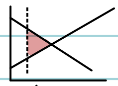
efficient quantity := amt of Q that produces the largest economic surplus

Market Failure & Deadweight Loss (DWL)

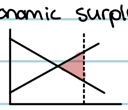
↳ forces of supply & demand → inefficiency

↳ through mkt power, externalities, information problems, irrationality, or gov regulations

DWL := how far economic surplus falls below surplus at efficient outcome



under production



over production

Critiques: equity, ability to pay, means to an end