

Q 2. p64

Directed  $\rightarrow$  harm not  
evenly distributed over  
population

2 upwind	WTP \$1,000 -	non-use
1 downwind	WTP \$15,000	<u>use</u>

Total WTP = \$17,000	} Net Benefit
" Cost = \$21,000	

Pareto - this not justified

use values → experience  
direct effect  
→ cost ↑

non-use values

↳ [→ option value  
→ existence value]

interdependent utility

Potential PI . Scitovsky - transfer  
made

Hicks  
Kaldor } If gainers can

transferable  
utility

compensate losers  
& still be better off  
project is justified

Cost > Benefits

DW - pay \$15,000 - NB = 0

UW pay \$6,000 NB = -\$4,000

Plan B charge DW \$21,000 cost  
 UW \$0

UW Total NB \$2,000

Majority Rule - 2 for scrubber  
 1 against

Tyranny of Majority  
 "protect" from harm

Merit good - until consumed  
 don't know value ]

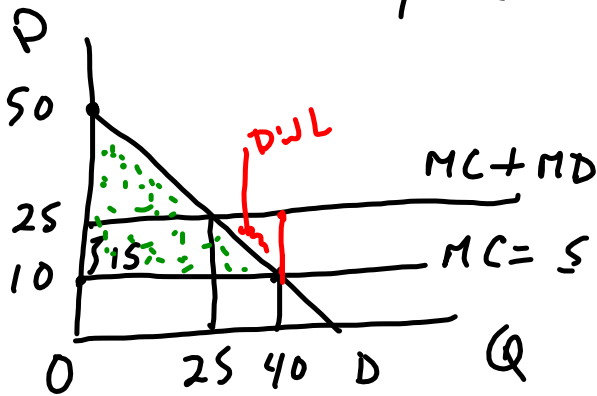
Health cost externality  
- Smoking regs

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Q1 p87 → Theory of Second Best

D:  $Q = 50 - P$  or  $P = \underline{50} - Q$

S:  $MC = p_{to} = 5$



$P_e = 10$   
 $Q^e = 40$   
 $Q^s = 25$

DWL - dead weight loss  
 value in consumption < cost to produce

Cons. surplus with only MC (price = \$10)  
 $\frac{1}{2} \cdot 40 \cdot 40 = \underline{\underline{800}}$

with externality  
reduce CS

$$DWL = \frac{1}{2} 15 \cdot 15$$

$$= \$112.5$$

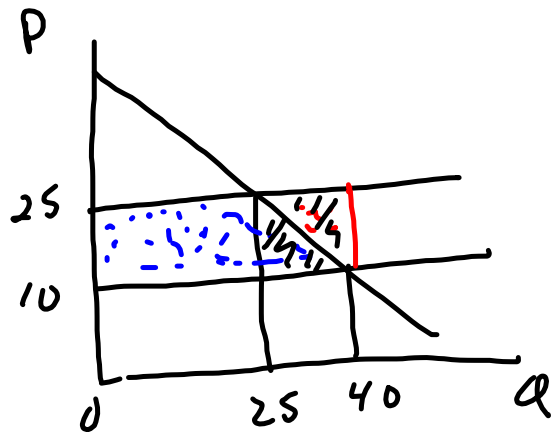
$$\text{Full cost} = \$25$$

Price + MD

$$\text{Loss of CS} = \$112.5 + \$375 = 487.50$$

$$\text{Loss} = 112.5 + 487.5 = 600$$

DWL	CS
Net surplus	= 200



## Theory of Second Best

Lipsey + Lancaster

All markets  $\underline{P = MC}$  (includes all costs)  
 so here  $P = \$25$

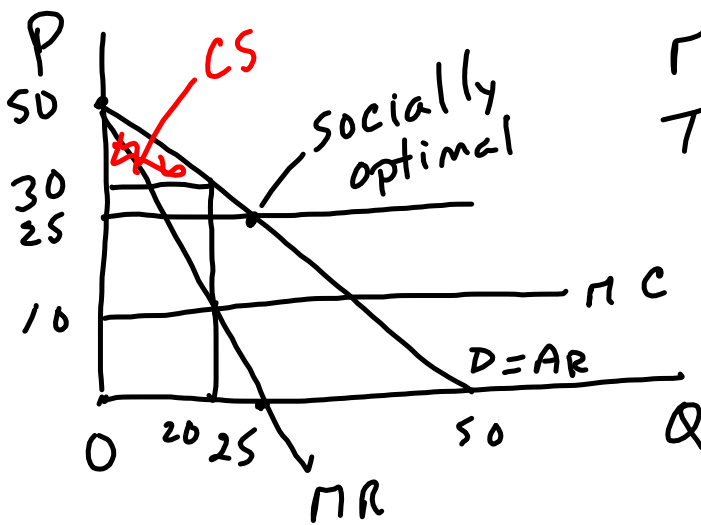
$P_{\text{actual}} \text{ is } \$10 \quad P < MC$

2nd Best  $\rightarrow P \neq MC$  elsewhere

Distortion ( $P < MC$ ) can't remove

Allow another distortion to  
 persist if it offsets  
 the initial





MR      D:  $P = 50 - Q$

$$TR = P \cdot Q$$

$$= (50 - Q) \cdot Q$$

$$= 50Q - Q^2$$

$$MR = \frac{dTR}{dQ}$$

$$MR = 50 - 2Q$$

↑  
slope = 2  
times  
D slope

Max  $\Pi$      $MR = MC$

$$50 - 2Q = 10$$

$$Q = 20$$

$$P = 50 - Q$$

$$= 30$$

$$> MC + MD$$

$$CS = \frac{1}{2} \cdot 20 \cdot 20 = \underline{\underline{200}}$$

Commons

Box p97

Costello et al Science 2008 \*

identify fish species where  
exclusion has accomplished  
+ fish stock preserved

~~Alex+~~

Monday 16 Feb