Minimum Wage example:

Suppose there exists 2 cities:

City A (Monopsonist)	&	City B (Perfect Competitive)
Demand: $W_D^A = 25 - 5L_D^A$		$W_D^B = 25 - L_D^B$
Supply: $W_S^A = 3 + 3L_S^A$		$W_S^B = 1 + 3L_S^B$
→ MC: $MC_L = 3 + 6L_S^A$		

(1) Solve for both Monopsony & PC E2 in City A

Comp E2: $W_S^A = W_D^A$, $L_S^A = L_D^A$

$3 + 3L = 25 - 5L \Rightarrow 8L = 22$

$L^A = \frac{22}{8} = 2.75$

$3 + 3(\frac{22}{8}) = 11.25$

(2.75, 11.25)

Monopsony: $W_D^A = MC_L$

$25 - 5L_m = 3 + 6L_m$

$11L_m = 22 \Rightarrow L_m^* = 2$

$3 + 3(2) = 9$

(2, 9)

$3 + 6(2) = \times$

(ii) Solve for π in City for each market structure. Assume that

$$TR_A = 100 \quad \& \quad r \cdot K = 15$$

$$\pi = TR - w \cdot L - r \cdot K$$

$$\pi_{PC} = 100 - (2.75)(11.25) - 15$$

$$\boxed{\pi_{PC} \approx 54}$$

$$\pi_M = 100 - (9)(2) - 15$$

$$\boxed{\pi_m = 67}$$

$$\pi_m > \pi_{PC}$$

(iii) Solve for E2 in city B

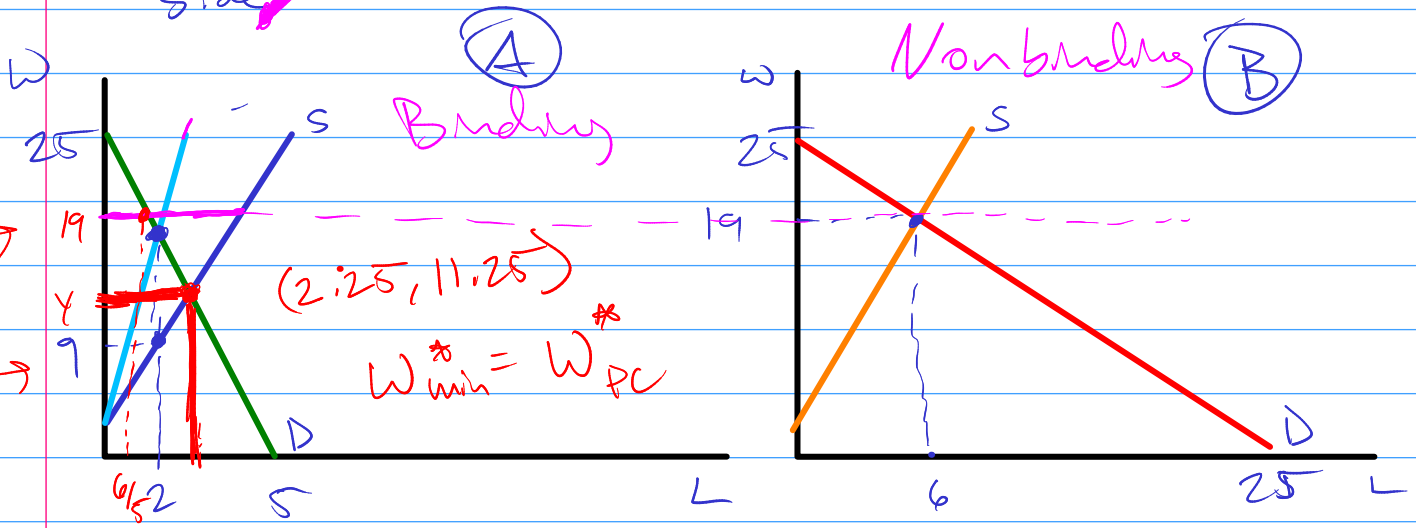
$$25 - L_D = 1 + 3L_S$$

$$4L = 24 \Rightarrow L^* = 6$$

$$w_B^* = 1 + 3(6) = 19$$

$$\boxed{(6, 19)}$$

(III) Graph both labor markets side by side



$W^*_{min} = W_{FC}$ (2.25, 11.25)

Demand: $W^A_D = 25 - 5L^A_D$ — $W^B_D = 25 - L^B_D$

Supply: $W^A_S = 3 + 3L^A_S$ $W^B_S = 1 + 3L^B_S$

MC: $MC_L = 3 + 6L^A_S$ —

(IV) Suppose the government implements a minimum wage equal to

$$W_{min} = 19$$

Is it binding in each city?

Is each city better off?

B is the same

A

$$W^D = 19 = 25 - 5L$$

$$\left(L^*_{min} = \frac{6}{5} \quad W^*_{min} = 19\right)$$

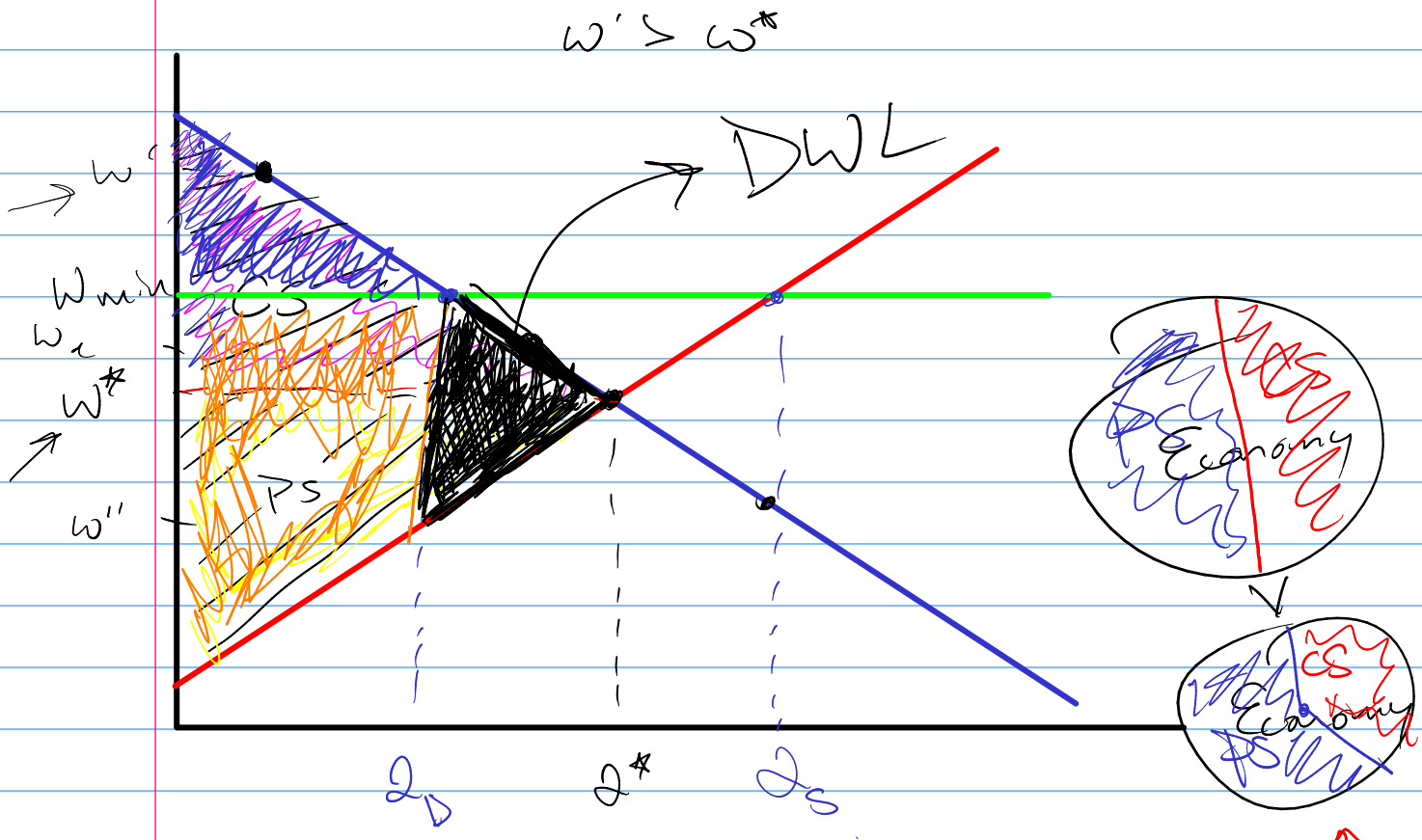
Market Power Spectrum

Monopsonist — Amazon — Walmart — Farms — Perfect Competitive

(One Buyer) (∞ buyers)

Perfect — Monopoly

(∞ sellers) (one seller)



$w_a < w_{min}$

w-Efficient ↑