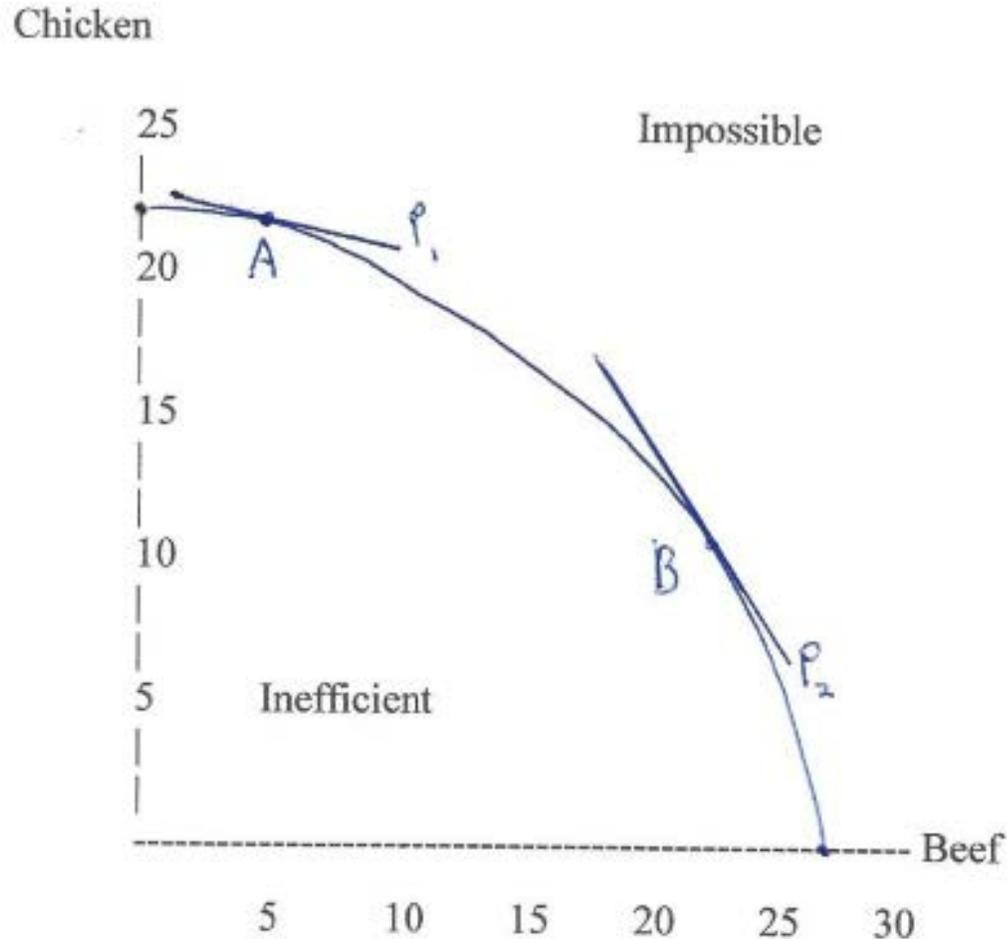


The Law of Supply

Supply

- Only an issue due to scarcity
- Trade-offs—obtain more of one good by giving up some other goods
- Private price vs. social cost
- For society as a whole, nothing is ever free

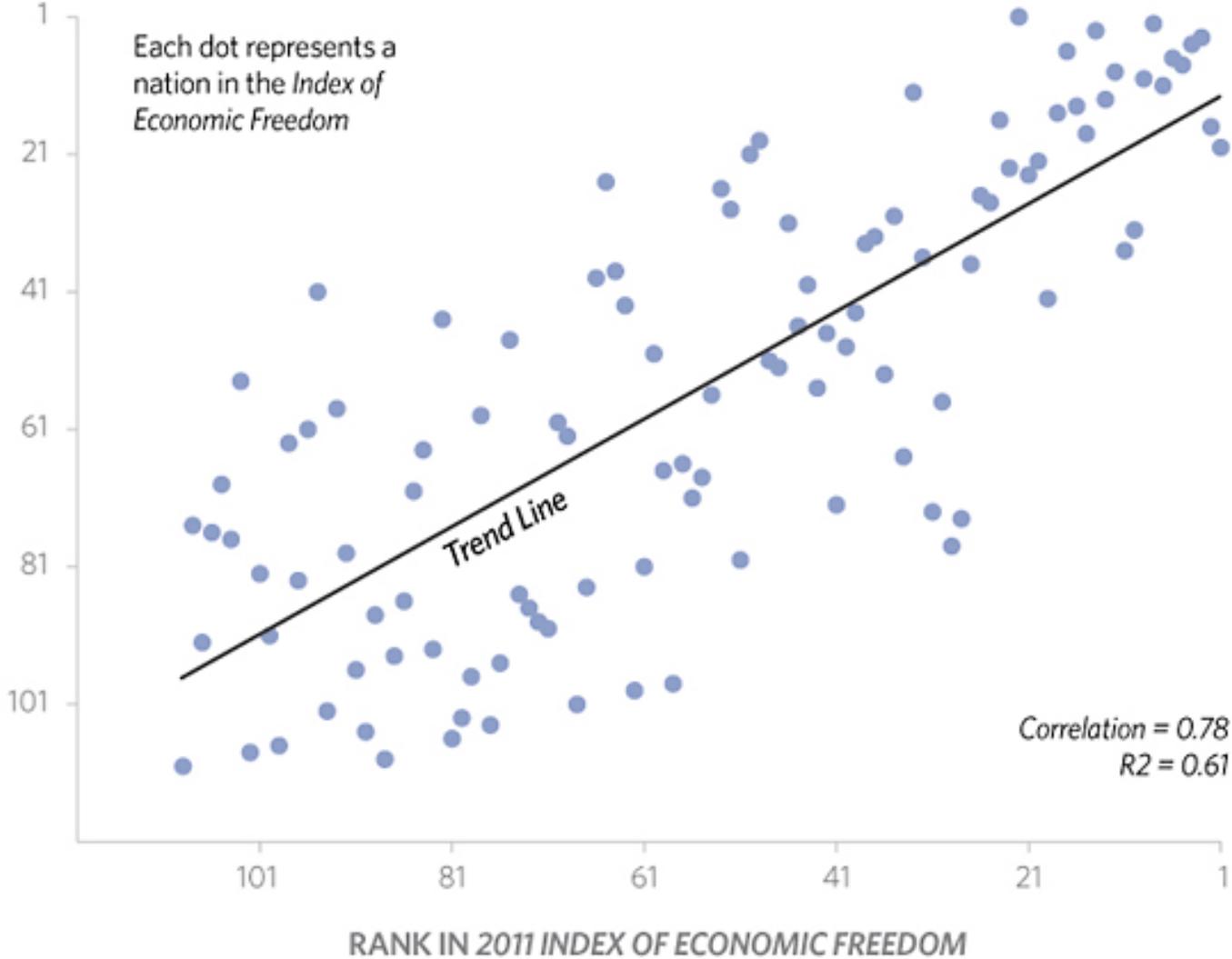
The Production Possibility Frontier



- All Resources Devoted to Chicken Production—Maximum 22 Chickens
- All Resources Devoted to Beef Production—Maximum 27 Cows
- High Price for Chickens (Line P_1)—Chicken/Cow Production Ratio High (A)
- High Price for Cows (Line P_2)—Cow/Chicken Production Ratio High (B)
- More of One Good, Less of the Other

Economic Freedom Promotes Overall Well-Being

RANK IN LEGATUM PROSPERITY INDEX



Sources: Terry Miller and Kim R. Holmes, *2011 Index of Economic Freedom* (Washington, D.C.: The Heritage Foundation and Dow Jones & Company, Inc., 2011), <http://www.heritage.org/index>; and 2010 Legatum Prosperity Index, <http://www.prosperity.com/downloads/2010LegatumProsperityIndexBrochure.pdf> (accessed November 1, 2010)

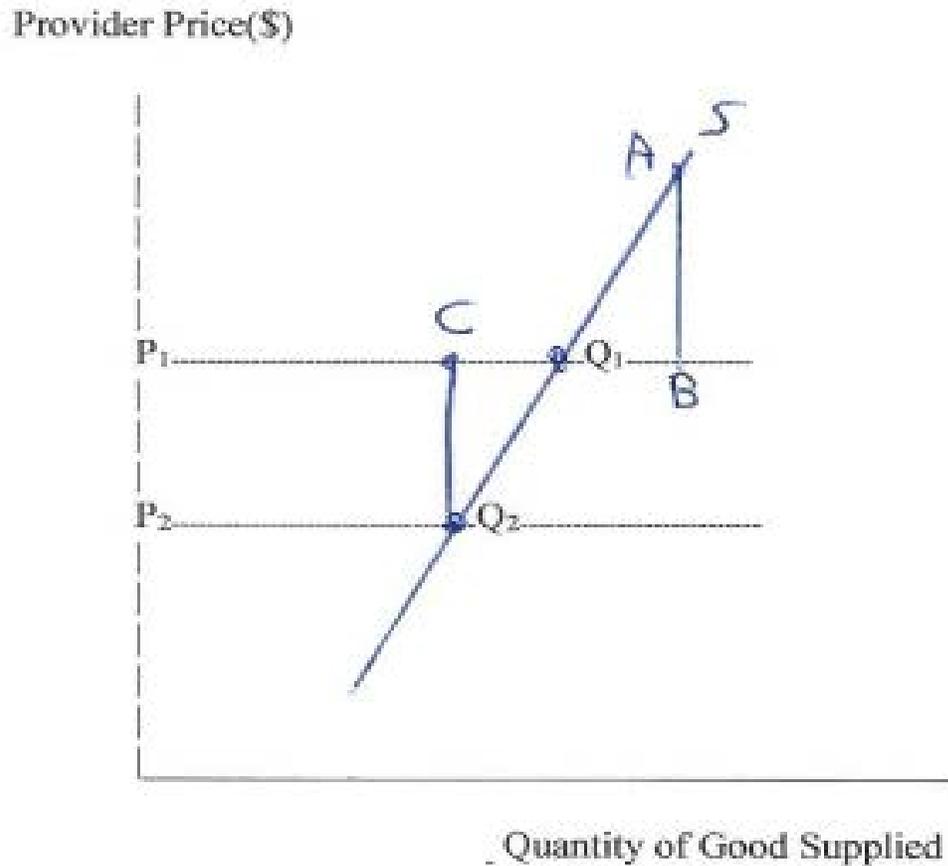
Economic Freedom and Economic Well-Being

- China results typical—100th in economic freedom, 79th in per capita GDP (\$16,660)
- Countries in top income quintile (best 36, \$37,000+)
 - 69% in top freedom quintile
 - 20% in second freedom quintile
 - 11% in third income quintile (3 oil countries and Italy)
- Unlikely China can reach top income without political reform

The Supply Curve in a Single Industry: Background

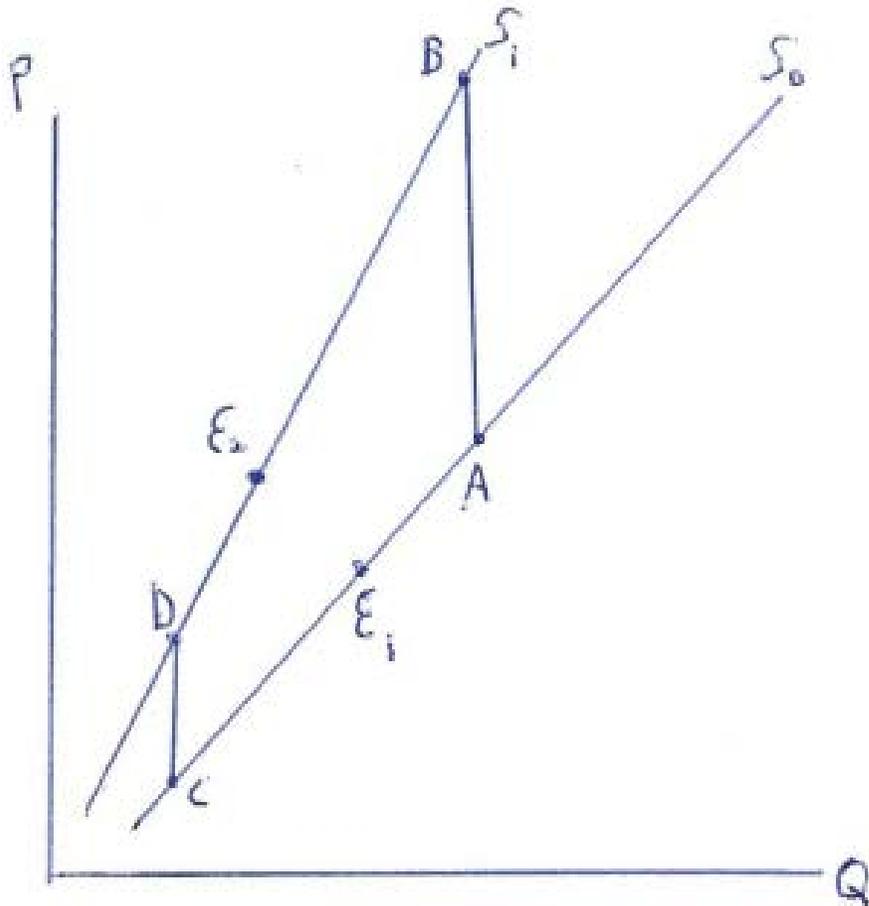
- Represents the amount of a good that producers wish to supply at any given price
- Supply curve always upward sloping—higher price needed to induce greater quantity supplied
- Relevant price for a supply curve is the per unit amount actually received by producers
- Producers react to changes in price by movements along the curve
- Non-price variables will cause entire curve to shift

The Supply Curve



- If price changes from P_1 to P_2 , producers respond by changing quantity provided from Q_1 to Q_2
- Supply curve is a marginal cost curve
 - Marginal cost above given price, producers lose money
 - Marginal cost below given price, opportunities for gain being lost

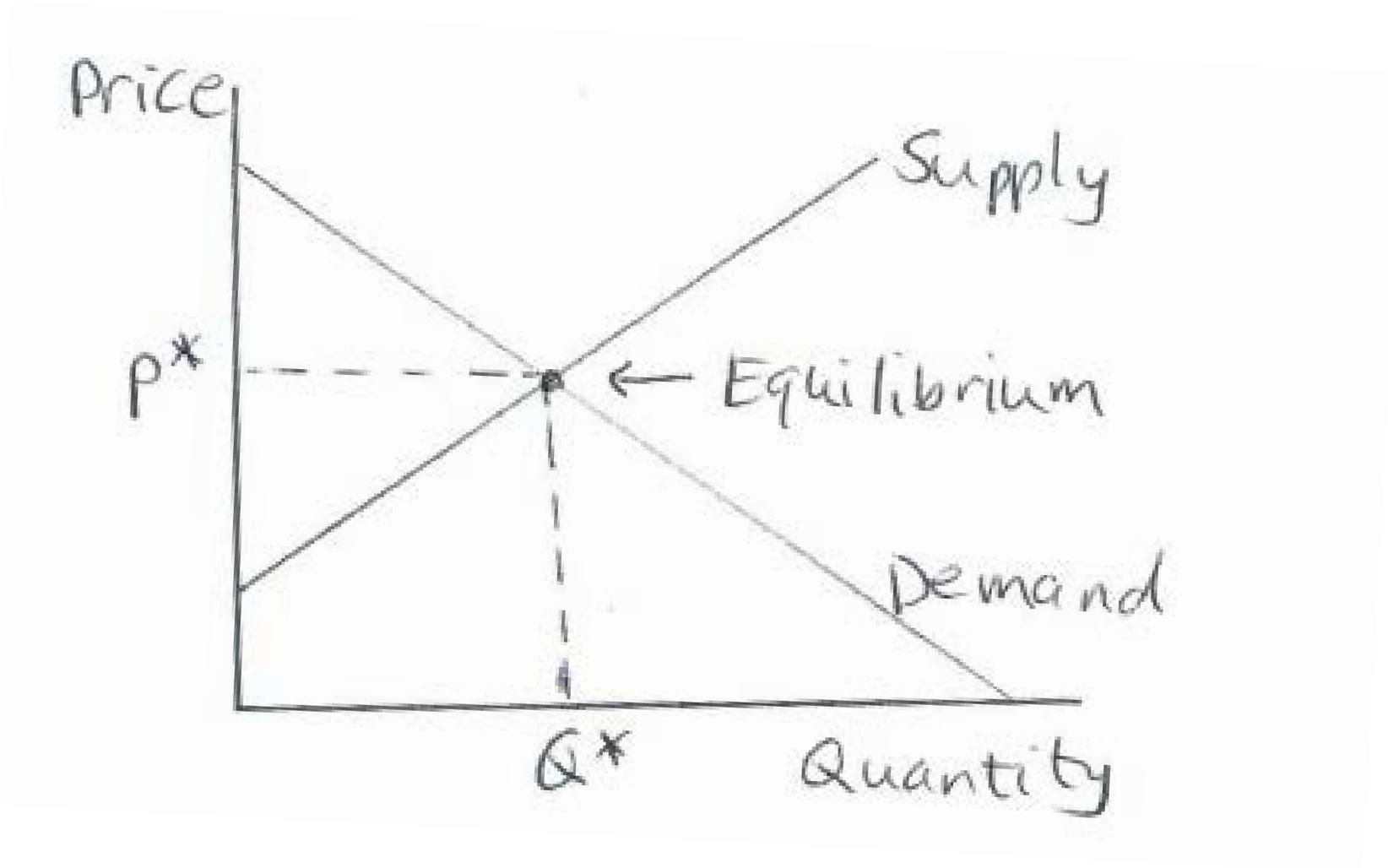
The Case of Air Pollution



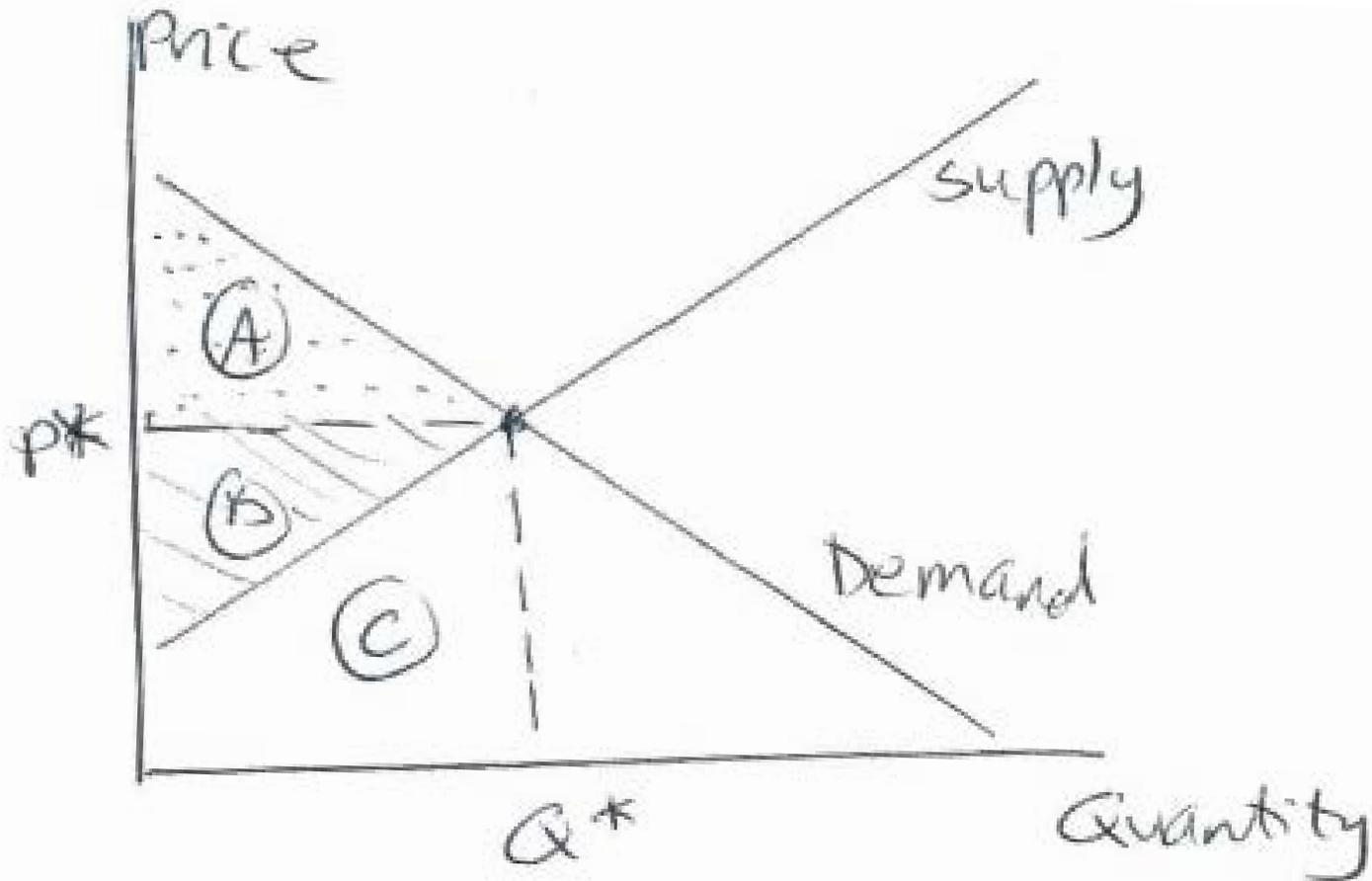
- Supply curve increases by marginal social cost of pollution (CD, AB)
- Optimal point shifts from E_1 to E_2
- Higher prices, lower quantity

Supply Meets Demand:
Equilibrium, Shortages,
Surpluses

At the equilibrium price, quantity supplied = quantity demanded

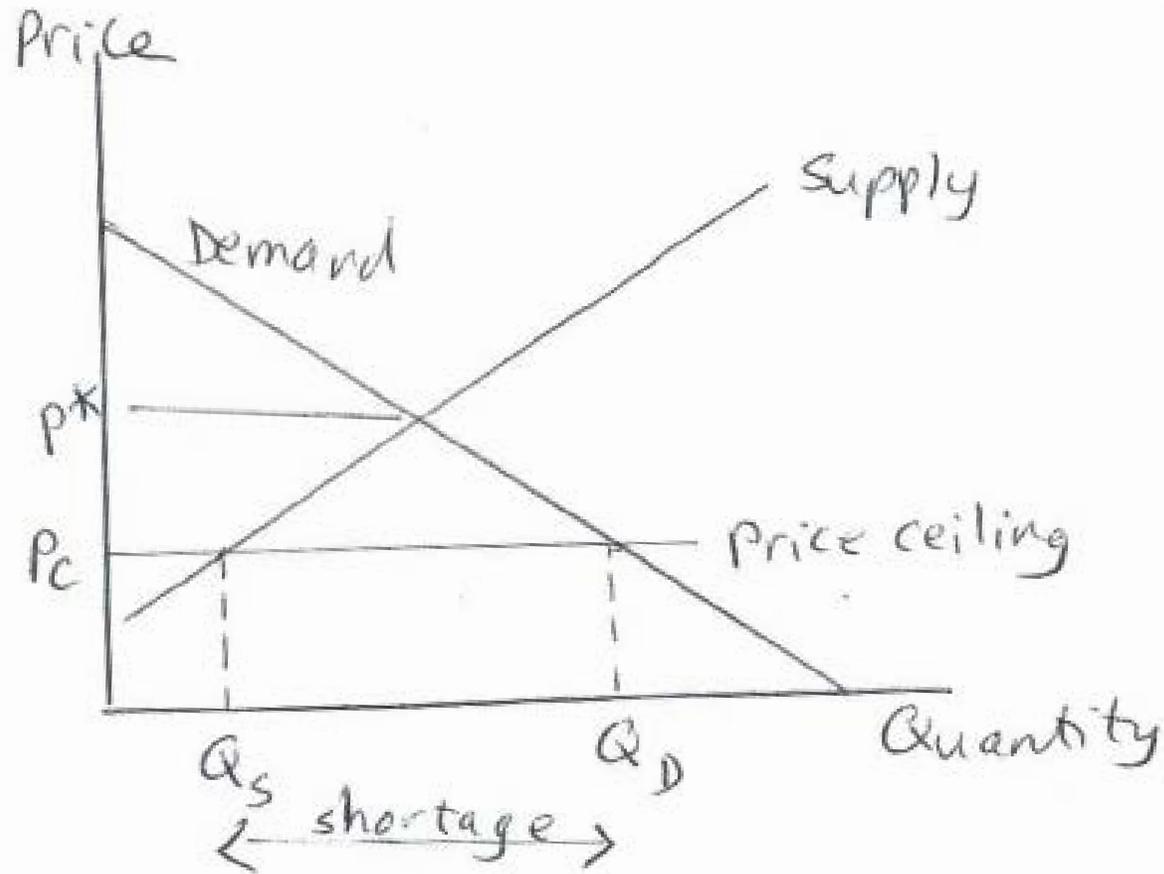


And consumers and producers get a surplus!

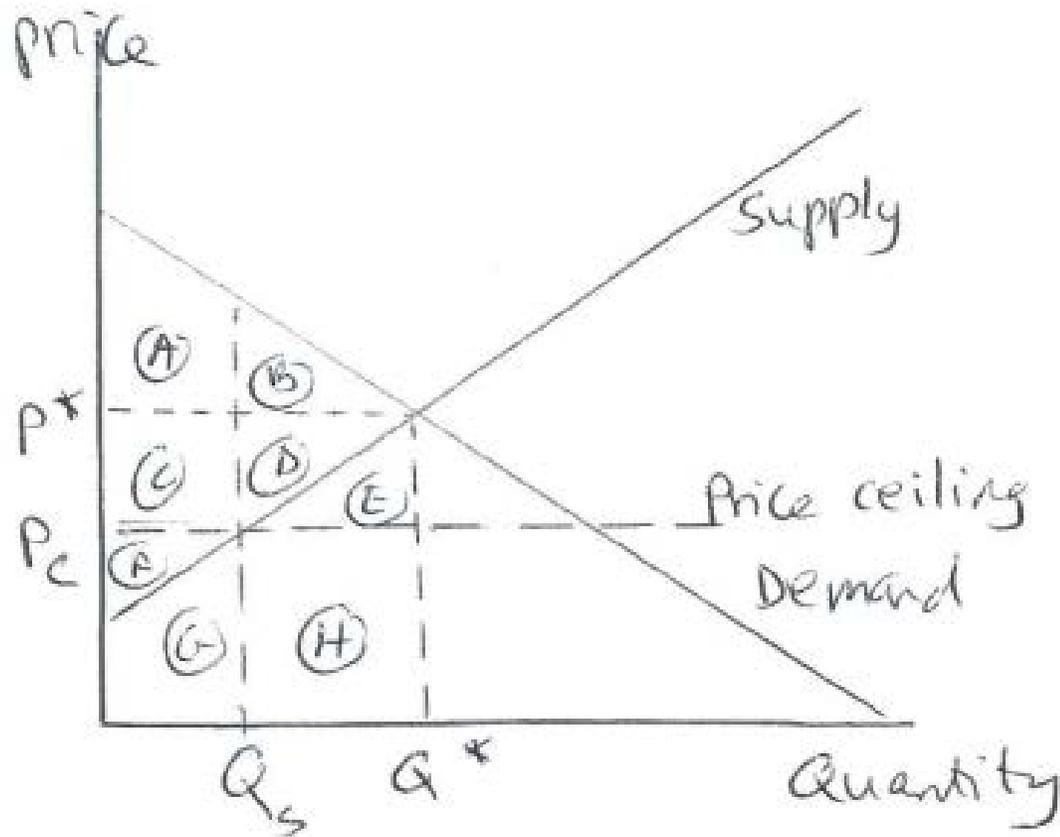


- Consumers pay B + C, get consumer surplus of A
- Producers receive B + C, get producer surplus of B
- Total surplus = area between Supply and Demand curves: AHA!!!

Price ceilings cause shortages



Price ceilings cause deadweight loss

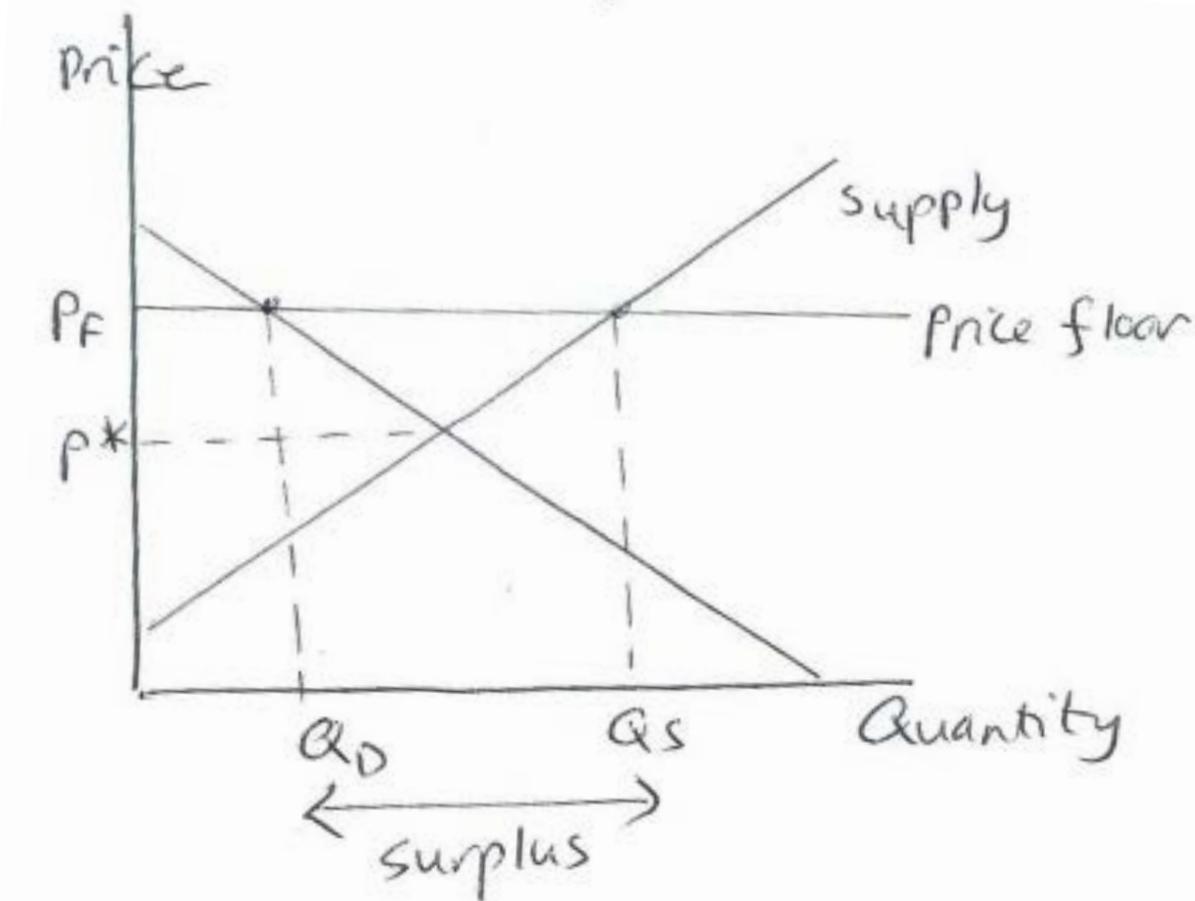


- Producer surplus falls from $(C + D + F)$ to only F
- Consumer surplus increases from $(A + B)$ to $(A + C)$
- BUT society as a whole has lost the area $(B + D)$ between the Supply and Demand curves
- AND only some consumers benefit

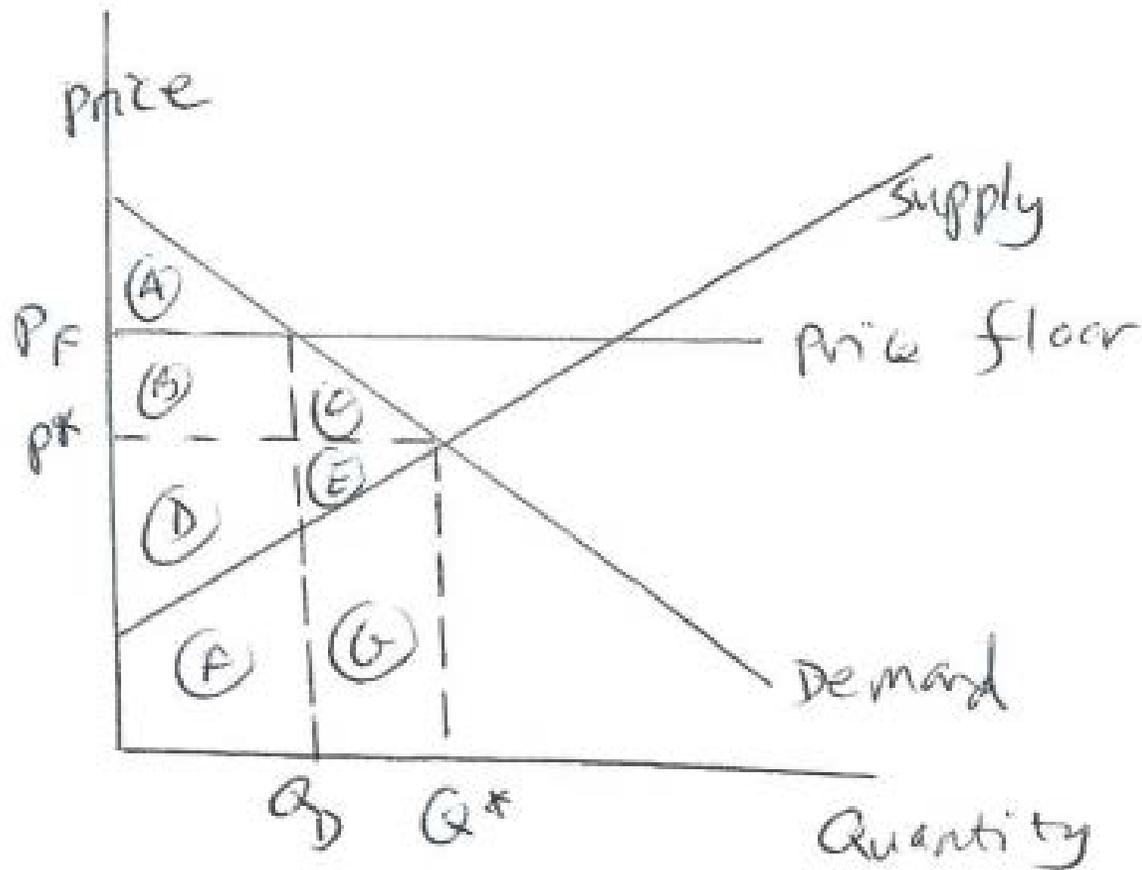
How to allocate supply with shortages

- “First come, first served”
- Lottery
- Supplier power/favoritism
- Consumer threats
- Bribes (a market mechanism)
- Government rationing

Conversely, price floors cause surpluses



Again, deadweight loss



- Suppliers are better off: producer surplus is $(D + B)$ instead of $(D + E)$
- Consumers are worse off: consumer surplus is only A , instead of $A + B + C$
- Deadweight loss: $C + E$
- And also inefficiency of production

How to allocate production with surpluses

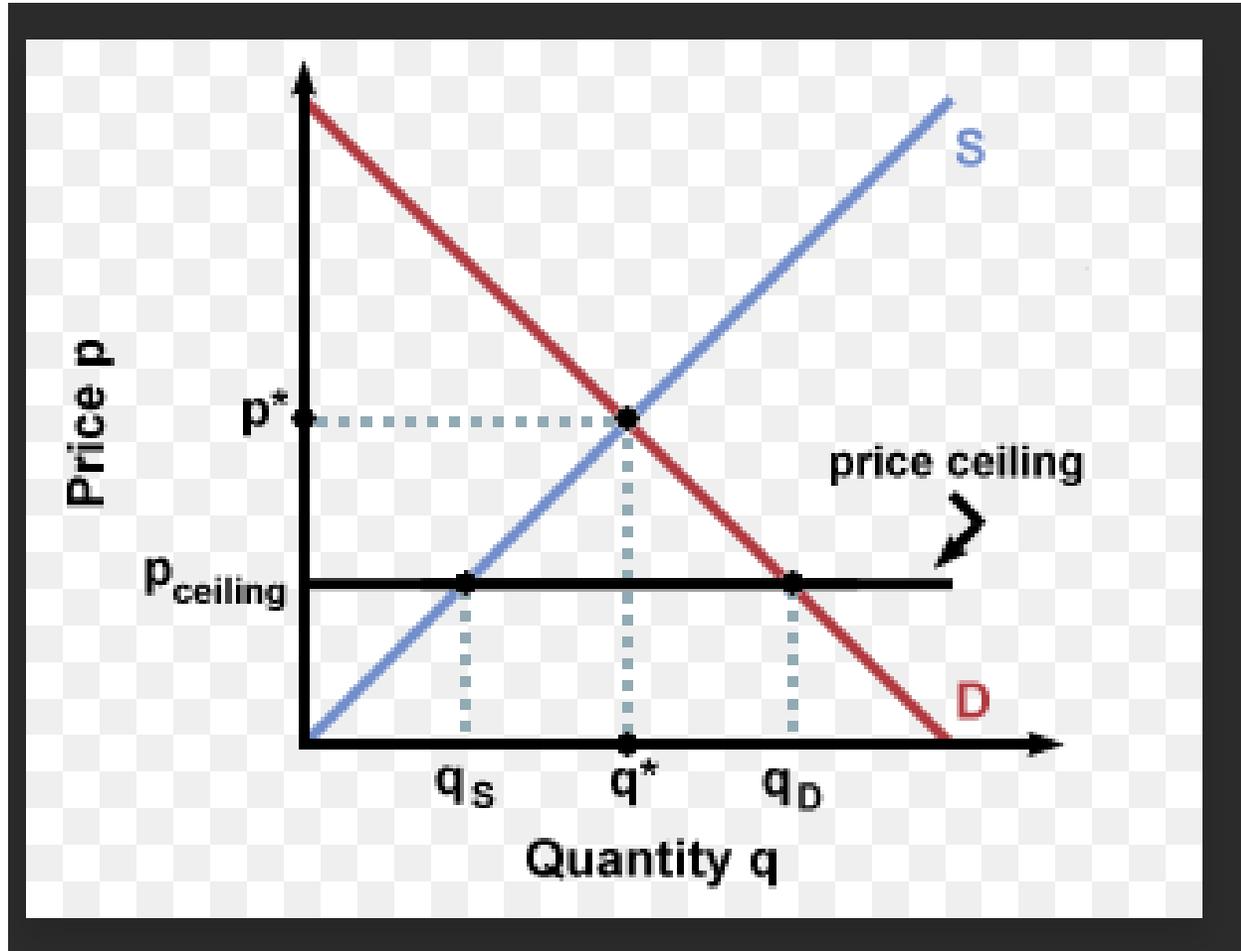
- Cartel like OPEC
- Buyer power/favoritism
- Government pays farmers to keep land idle
- Government buys up excess supplies to store or give away
- Arbitrage: Those with power to sell can pay someone else to produce it more cheaply

An Example of a Price Ceiling: Rent Control

Economists' opinion of rent control

- “A ceiling on rents reduces the quantity and quality of housing available”: 93 percent of professional economists agree.
- Rent control is “the most efficient technique known to destroy a city – except for bombing.” (Assar Lindbeck, Swedish economist)
- “If educated people can’t or won’t see that fixing a price below the market level inevitably creates a ‘shortage’ ... it is hard to believe in the usefulness of telling them anything whatever in this field of discourse.” (Frank Knight, University of Chicago economist)

The familiar picture! Price ceiling creates and artificial shortage



Advantages of the price mechanism to allocate housing

- Bidding up of rents → people economize on space
- Higher rents → increased supply
- No administrative costs or burdens

“The ultimate solution of the housing shortage must come from new construction.” (Milton Friedman and George Stigler, 1946)

Bernie Sanders speaks out in favor of rent control (July 2019)

“I was born and raised in a three-and-a-half room apartment in Brooklyn. My father was a paint salesman who worked hard his entire life, but never made much money. This was not a life of desperate poverty -- but coming from a lower middle-class family, I will never forget how money, or really lack of money, was always a point of stress in our home.

“My mother's dream was that someday our family would move out of that apartment to a home of our own. She died young, and her dream was never fulfilled. But during her life, at least our family was always able to afford a roof over our heads, because we were living in a rent-controlled building. That most minimal form of economic security was crucial for our family.

“Today, that same ability to obtain affordable housing is now denied to millions of Americans. In the United States, more than 11 million renter families pay more than half of their limited incomes on housing and utilities. Even worse, on any given night, there are more than half a million Americans who are homeless.”



AAAAAAGH!

Let's see how Vienna, Austria did it!

“Vienna, Austria ... has progressive zoning, massively funds social housing, and maintains rent stabilization through public or nonprofit ownership of most of its housing stock. In fact, Vienna used rent control to bring about its housing miracle. During the Red Vienna period, the City used rent control to drive down property prices then bought up lots of apartment buildings. A blunt and hard to replicate method, but it worked... Since so much land is in public hands, the City has acted as the primary developer basically ever since.”

(“The Case for Rent Control”, *The Urbanist*, August 2019)

In other words ...

- The city of Vienna defined housing as “a basic human right”
- It then passed rent control regulations to drive down market prices, destroying the wealth of private owners
- It then bought up the private housing stock at bargain prices
- It continues to prioritize “social housing” over other goals with taxes and subsidies
- We may ask: What will be the effect of immigration + guaranteed housing?

Compare and contrast with the plans of the Gondoliers who become King of Barataria

An ideal king ...

- would abolish taxes and make everything cheap, except gondolas –
- and give a great many free entertainments to the gondoliers –
- and let off fireworks on the Grand Canal, and engage all the gondolas for the occasion –
- and scramble money on the Rialto among the gondoliers.

Such a king would be a blessing to his people, and if I were a king, that is the sort of king I would be.

(W. S. Gilbert, *The Gondoliers*, 1889)

An Example of Price Floors: Minimum Wage

Opposing Views of the Minimum Wage

- Virginia Legislative Black Caucus:

‘We support empowering workers by raising the minimum wage to \$15 an hour for all areas of the state and removing exemptions that are rooted in racism and have unjustly kept many people of color from being paid the minimum wage.’

(Blue Virginia website, March 3, 2020)

- Milton Friedman

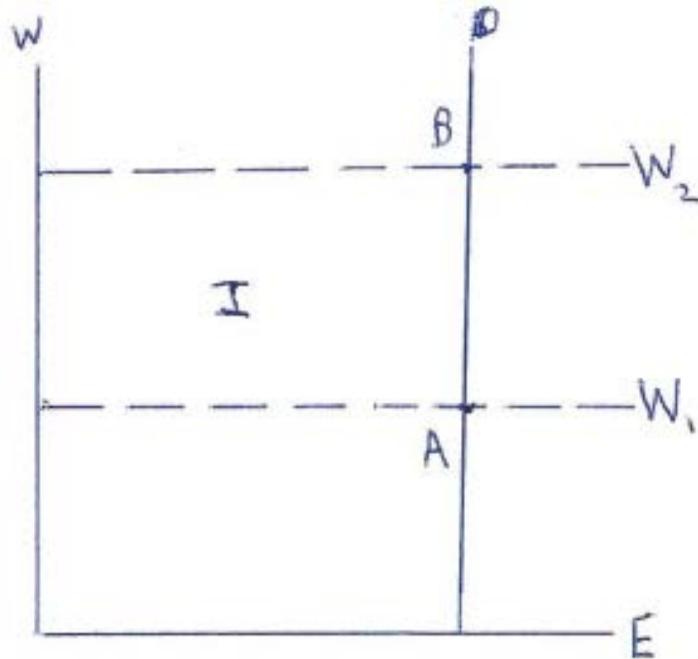
‘The state can legislate a minimum wage rate. It can hardly require employers to hire at that minimum all who were previously employed at wages below the minimum. The effect of the minimum wage rate is therefore to make unemployment higher than it would otherwise be....The people who are rendered unemployed are precisely those who can least afford it.’

(Capitalism and Freedom, 1962)

Economic Analysis of the Minimum Wage: Cui Bono?

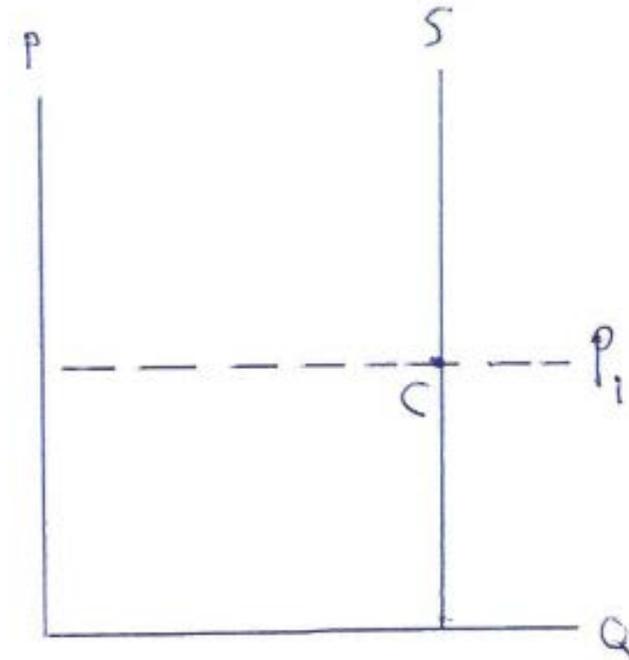
- The practical effect of the minimum wage is to prevent low wage and cost groups and regions from competing with high wage/high cost regions.
 - Originally proposed as a device to keep blacks from competing with unionized white trade workers.
 - Federal as opposed to state minimum wage laws passed to prevent lower cost/non-union Southern states from competing with higher cost/unionized Northern states.
 - Especially harmful to younger, less educated workers just entering the labor market.
- *Cui bono* is a good tool to use when evaluating proposed changes in economic policy.

Economic analysis of the minimum wage: Imaginary



LABOR MARKET

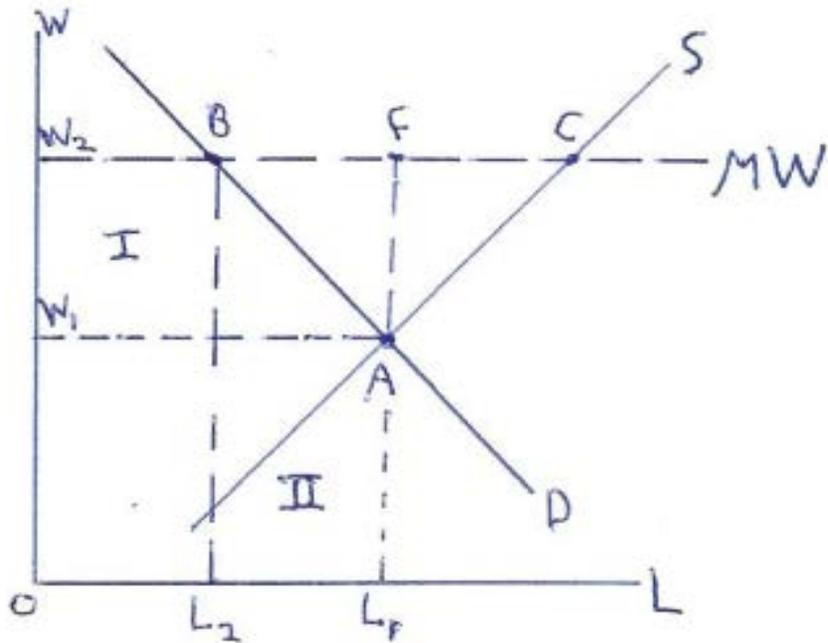
- Fixed demand for labor
- Wage rate set by fiat
- Wages rise, employment unaffected



GOODS MARKET

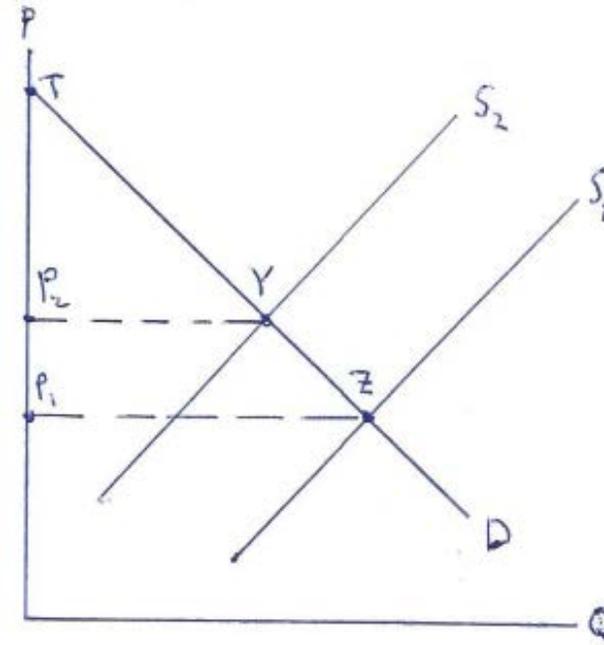
- Fixed supply curve for goods
- Price set by fiat
- Output unaffected by higher labor costs

Economic analysis of the minimum wage: Realistic, short-term



LABOR MARKET

- Equilibrium changed from A to B
- Wages increase to MW for those still employed
- Number of employees falls from L_1 to L_2



GOODS MARKET

- Equilibrium changes from Z to Y
- Output of goods falls
- Loss of consumer surplus

Effect of the \$15 minimum wage on poor workers

	<u>Free Market</u>	<u>Short Run</u>	<u>Long Run</u>
Employment	100	67	33
Wage rate	\$11	\$15	\$15
Total earnings	\$1100	\$1050	\$495

Short run

- Employment down
- Wage rate up
- Total earnings for poor probably down

Long run

- Employment down sharply
- Wage rate up
- Total earnings down sharply

Conclusion: A drastic increase in the minimum wage is very bad public policy

- Most of the harm falls on the poorest elements of society.
- Creates crime, social unrest in urban areas
- Friedman—'the minimum wage rate is one of the most , if not the most, anti-black laws on the statute books.'

THE END ...
for now!