PC Industry: Economic Profit, Entry, Exit & LR Equilibrium

Questions We Can Answer

1) Why is perfect competition good for society?

2) Why do industries rise and fall?

Adam Smith

- "Invisible Hand"
  - People are motivated by self-interest.
  - Yet, collectively, such a goal can serve society's best interest.
  - Hence, perfectly competitive markets can enable society to maximize its well being.
  - Discuss later: Not necessarily always.

Economic Profit

- Firms seek economic profit.
- Economic Profit =
- Total Revenue - Economic Costs
- Total Revenue - (Explicit + Implicit Cost)
- Is this news to us? No, we know this!!!

Economic Profit

- Implicit Costs = Opportunity Costs
- Firm: Opportunity Cost = Normal Profit
- So, can say: When Economic Profit > 0
- in common lingo, "Earning above normal profit".

Economic Profit

- Accounting Profit = TR - Explicit Costs
- What most people quote.
- Economic Profit is relevant for economic decisions

Pudge Buffet's Decision To Farm or Not To Farm?

- Corn farmer with payments for land and equipment rental = $10,000/yr
-
- Supplies his labor.
- Only other option is retail store manager at $11,000/yr.
- *TR* from corn sales = $22,000

Revenue, Costs,Profit: Decision 1 Uses Own Labor Resource

Total revenue	Explicit costs	Implicit costs	Accounting profit	Economic profit	Normal profit
22,000	10,000	11,000	12,000	1,000	11,000

Observe: What's important here?

Economic Cost = Explicit + Implicit
= Explicit + Opp Cost
= 10000 + 11000
= 21000
Economic Profit = 1000 So, Farm.

Revenue, Costs,Profit: Decision 2 Uses Own Land Resource

Suppose Pudge inherited land, but could rent it for $6000? Farm or not?

Total revenue	Explicit costs	Implicit costs	Accounting profit	Economic profit	Normal profit
22,000	4000	11,000 +6,000	18,000	1,000	11,000 +6,000

Accounting Profit increases. But Economic costs and profit same. Decision same. Farm.

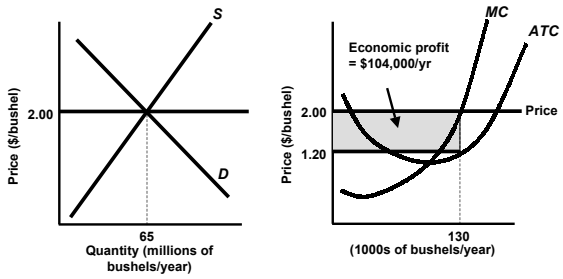
Revenue, Costs,Profit: Decision 3 Uses Own Capital Resource

Suppose Pudge could buy the equipment with resale value of $100,000? That money could have earned 10% in a savings account at the Bank.

Total revenue	Explicit costs	Implicit costs	Accounting profit	Economic profit	Normal profit
22,000	6000	11,000 +10,000	16,000	-5,000	11,000 10,000

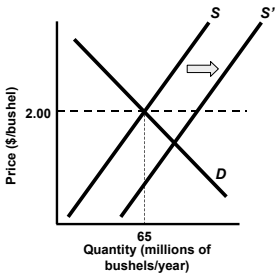
$100,000 goes into asset with resale value $100,000. Economic Profit = -5000. Don't Farm.

Short Run : Positive Economic Profit

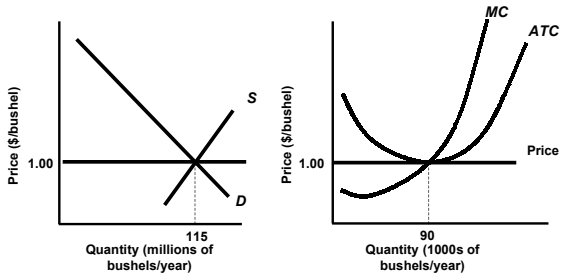


Market price of $2/bushel produces economic profits

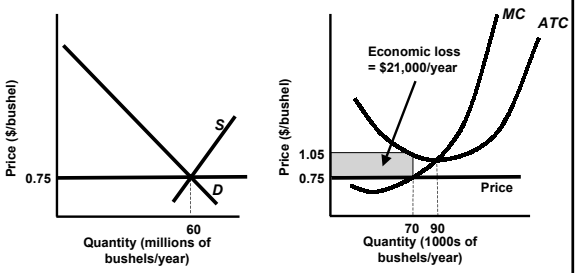
The Effect of Entry: Price Falls



Equilibrium when Entry Ceases

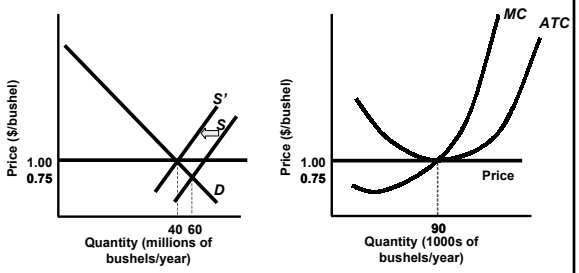


Short-Run: Negative Economic Profit (Loss)



Prices below minimum ATC results in economic losses.

Equilibrium when Exit Ceases



The departure of firms from the industry increases the market price

Summary
Entry/Exit

SR Positive Profits: Attract Entry
Market Supply Curve Shifts Out
Price Falls
P = MC= Min ATC, Zero Economic Profits

SR Loss: Induces Exit
Market Supply Curve Shifts In
Price Rises
P = MC = Min ATC, Zero Economic Profits

LR Equilibrium

LR Equilibrium

P = min ATC
So, profit max point, P = MC point is where
P = min ATC, where Economic Profit = 0

No tendency for entry or exit unless something changes.

Don't worry about text discussion of LR constant MC, etc.

Entry/Exit

What Happens if market initially in LR Equilibrium and:

One corn farm adopts cost-saving innovations?

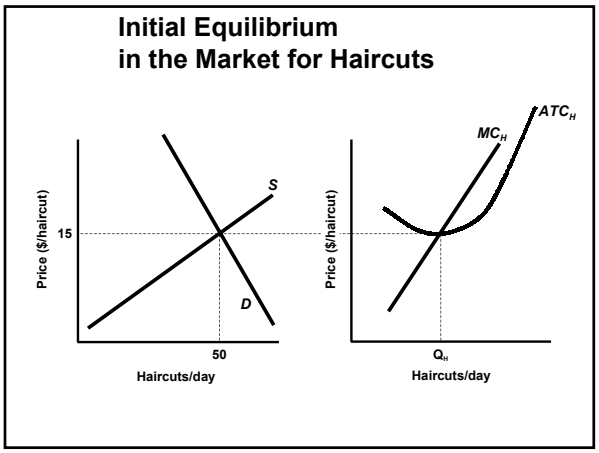
News reports circulate that corn producers use fertilizers that are bad for human health?

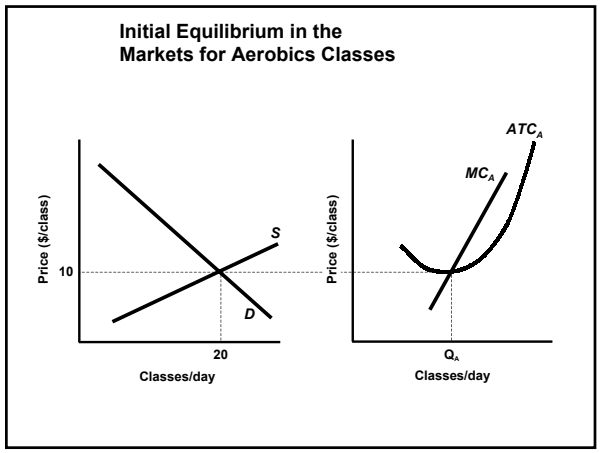
Rise & Fall of Industries

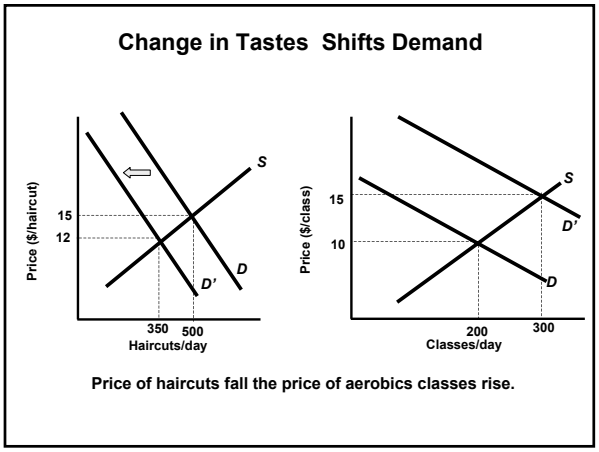
Firms seeking economic profit explains rise and fall of industries.

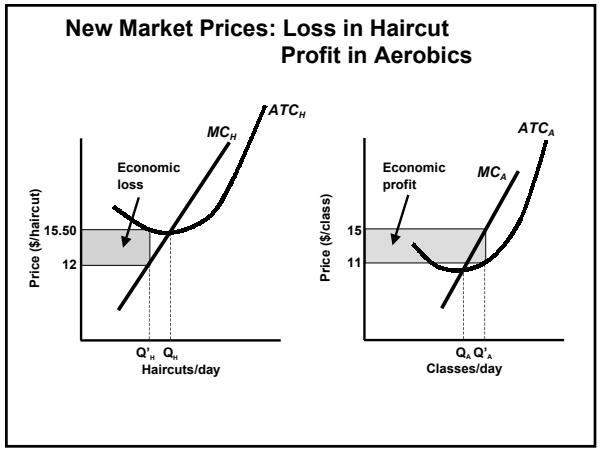
Hair Salon Services and Aerobic Fitness Markets

Change in Tastes: Long hair & fitness "IN THING"









Rise & Fall of Industries
Complete the Story
What Happens?

Negative Economic Profit in Hair Salon Industry leads to ...

Positive Economic Profit in Aerobic Industry leads to ...

Graph what happens: entry , exit , LR.

Summary

Economic profits consider economic costs, which include opportunity costs (the implicit costs).

Firm: implicit costs are “normal profit” they can earn using their resources (land, labor ,capital)

Seeking economic profit, free entry and exit in a PC industry leads to P = MC = min ATC.

P=min ATC means P is lowest it can be. Firm just earns normal profit. Good is cheapest it can be for a consumer.

Welfare in PC Market

Questions We Can Answer

1) Why is perfect competition good for society?

2) What effects do interventions like taxes, subsidies, and price controls have on society's welfare?

3) Who bears the burden of a tax?

4) What goods should be taxed?

Welfare in PC Market

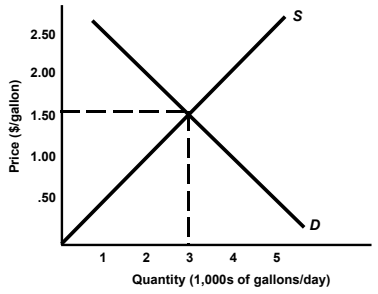
Real Questions We Can Answer

1) Should taxes be collected on luxury goods or necessities like gasoline?

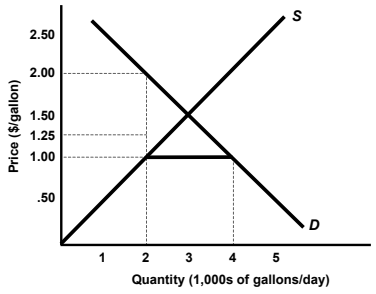
2) Will a tax on cigarettes reduce quantity demanded for cigarettes more for teens or adults?

3) Will price controls on housing and heating oil really help the poor?

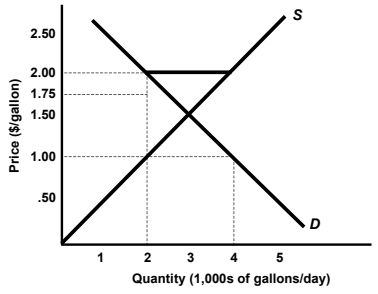
Market Equilibrium: No Interventions



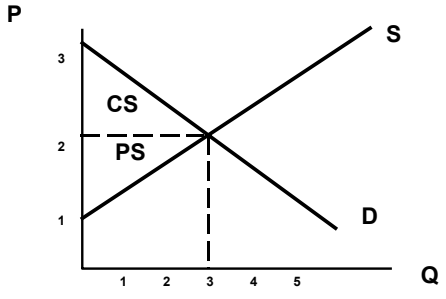
Excess Demand: "Cash on the table"
Q_s=2 exchanged in market



Excess Supply: "cash on the table"
Q_d=2 exchanged on market



Market Equilibrium: No Interventions
CS + PS Maximum



Interventions in Market

Price Ceiling: Intervention in Market that mandates a maximum price. Eg. rent control,

It must be below equilibrium, otherwise has no effect as a maximum price

Price Floor: Intervention in market that mandates a minimum price. It must be above equilibrium, otherwise has no effect.

Eg. Agricultural price support, minimum wage

Interventions in Market

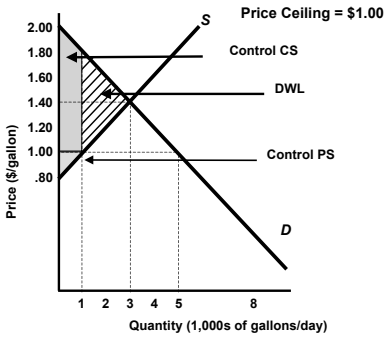
Per Unit Tax: An amount of money collected on each unit of good bought and sold.

In general reduces quantity demanded/supplied. Brings revenue to government for use in providing public services or transfer programs.

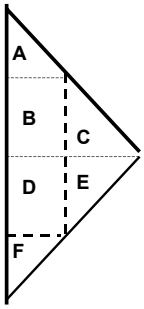
Per Unit Subsidy: An amount of money government gives out on each unit of good bought and sold.

In general, increases quantity demanded/supplied. Expenditure for government.

Effect of Price Ceiling



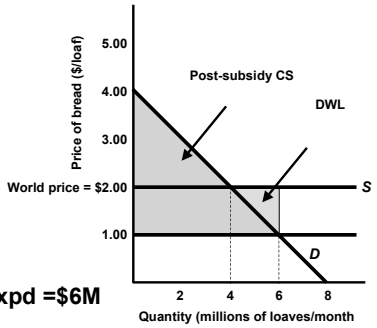
Price Controls: Change in Surplus



	Free Market	Control
CS	A + B + C	A + B + D
PS	D + E + F	F
Total	A+B+C+ D+E+F	A+B+D+F

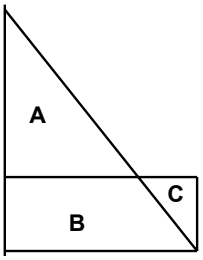
Change = Control - Free = - C - E
Waste is DWL = C+E

Effect of Subsidy



Govt Expd =$6M

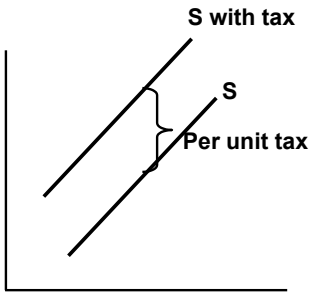
Subsidy: Change in Surplus



	Free Market	Subsidy
CS	A	A + B
PS	0	0
Govt	0	- B - C
Total	A	A - C

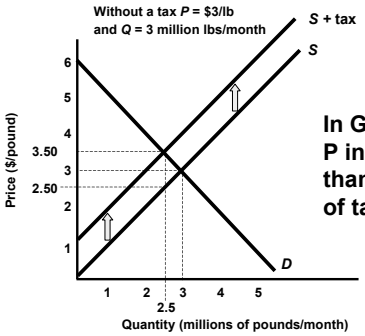
Change = Subsidy - Free = - C
Waste is DWL = C

Tax in Graph: Supply Curve Before & After Tax



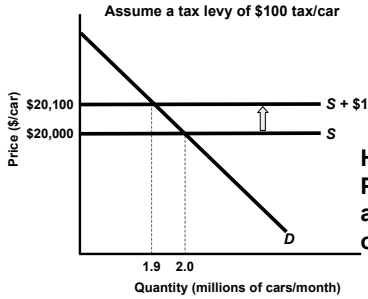
Plus tax at each level output raises MC by tax

Effect of a Tax on Equilibrium Quantity and Price



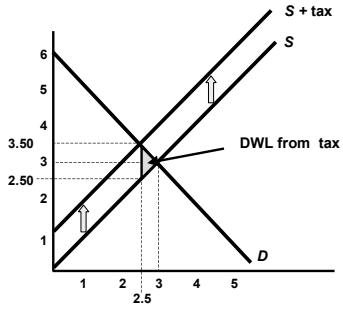
In General: P inc by less than amount of tax

Effect of a Tax: Perfectly Elastic Supply



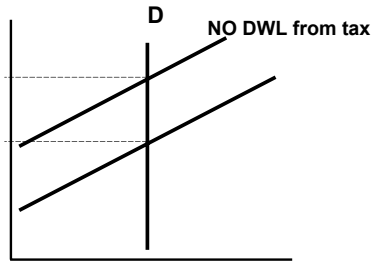
Here: P inc by amount of tax

Deadweight Loss (DWL) Caused by a Tax
Loss of CS & PS

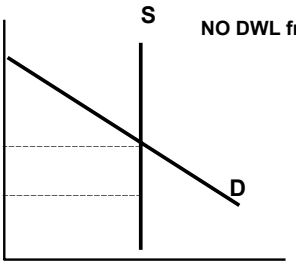


In General Consumer & Producer Share Burden

Burden of Tax: Perfectly Inelastic Demand
Entire burden on consumer

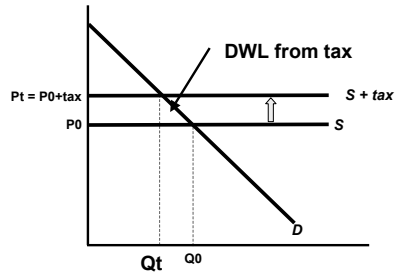


Burden of Tax: Perfectly Inelastic Supply
Entire Burden on Producer

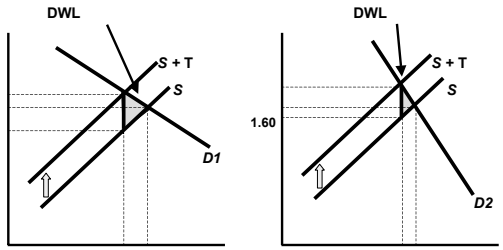


Can't raise price. Raise price, get excess supply.

Burden of Tax: Perfectly Elastic Supply
Entire Burden on Consumer

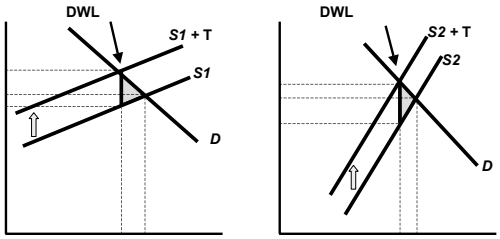


Elasticity of Demand and DWL from Tax



greater elasticity of demand → greater DWL

Elasticity of Supply and DWL from Tax



greater elasticity of supply → greater DWL

Burden & DWL

Distortion: Change in Behavior due to tax

Tax reduces quantity demanded (except inelastic)

Lower distortion gets lower DWL.

Quantity falls more for elastic demand & supply
Quantity falls less for inelastic demand & supply

Burden: Reduction in surplus from tax

Price rises more, more burden on consumer
Inelastic demand, Elastic Supply
Price rises less, more burden on producer
Elastic Demand, Inelastic Supply

Examples

Cigarettes: teens versus adults

Necessity vs luxury goods
gasoline vs yachts

Addiction goods

"Sin" Goods

Land

Summary

A perfectly competitive market with no interventions or restrictions maximizes the sum of producer and consumer surplus

Interventions such as price controls, taxes and subsidies are associated with wasted surplus, in general.

Such interventions may be necessary for other social goals, however. There may be better ways to achieve the goals.