
Econ 100A: Intermediate Microeconomic Theory Lecture 2

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2006.08.31

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Real Versus Nominal Prices [M, p. 12]

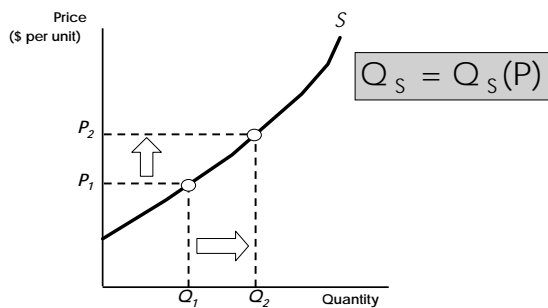
- **Consumer Price Index (CPI)** is a measure of aggregate price level; CPI is a price of a “basket”
- **Nominal price** is the absolute (or current-dollar) price of a good or service when it is sold
- **Real price** is the price of a good relative to the CPI (or constant dollar price)
- In this class we will work with real prices (mostly)
- Calculating Real Prices

$$\text{Real Price}_{\text{base year}} = \frac{\text{CPI}_{\text{base year}}}{\text{CPI}_{\text{current year}}} \times \text{Nominal Price}_{\text{current year}}$$

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The Supply Curve, [M, p. 20]

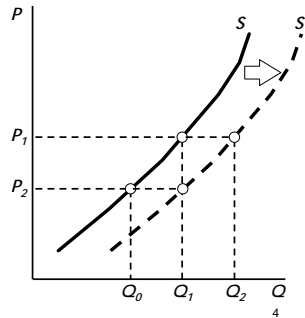


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Change in Supply, [M, p. 20]

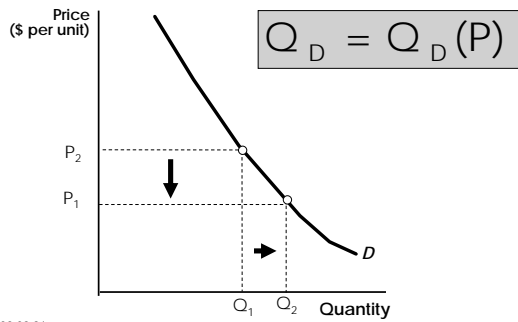
- "Change in supply" refers to the shift in supply curve (and "change in quantity supplied" – to movements **along** the supply curve)
- If the cost of raw materials falls
→ Supply curve shifts right
- Supply shifts (right): Occurs if producer expenses fall, i.e.:
 - Price of inputs falls:
 - wage (price of labor)
 - interest rate (price of capital)
 - materials
 - energy (gas & electricity)
 - premises (real estate rent)



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The Demand Curve [M, p. 22]

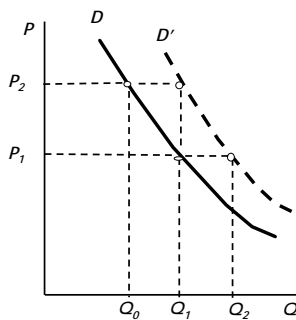


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Change in Demand [M, p. 22]

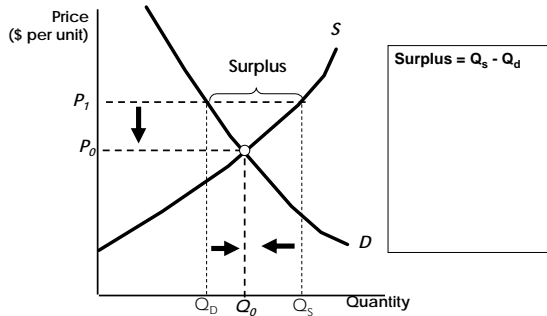
- "Change in demand" refers to the shift in demand curve ("change in quantity demanded" – to movements **along** the demand curve)
- If Income Increases
→ Demand curve shifts right
- Demand shift (right): if positive demand shock, examples:
 - Hurricane, earthquake → increased demand for housing in neighbor locations
 - Extremely hot summer → increased demand for rentals of ocean vacation housing
 - Lower interest rates → increased demand for buying housing
 - Baby boom → increased demand for all types of housing



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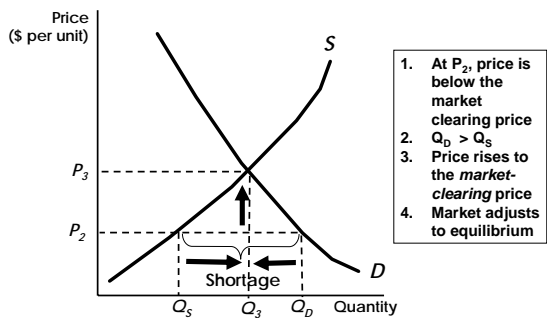
The Market Mechanism, surplus [M, p. 23]



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The Market Mechanism (Shortage) [M, p. 23]

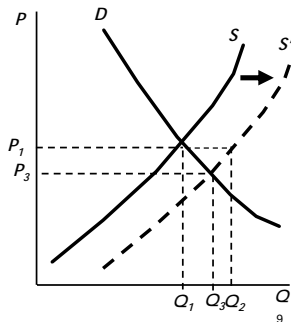


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Changes in Market Equilibrium

- Raw material prices fall →
 - S shifts to S'
 - Surplus at P_1 (between Q_1 and Q_2)
 - Price adjusts to a new equilibrium at P_3, Q_3



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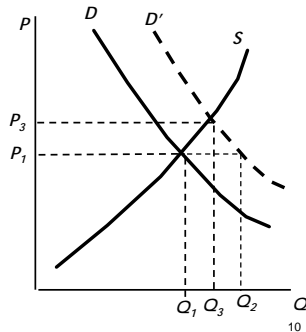
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Changes in Market Equilibrium

Income Increases



- Demand increases to D'
- Shortage at P₁ of Q₁ to Q₂
- Equilibrium at P₃ and Q₃

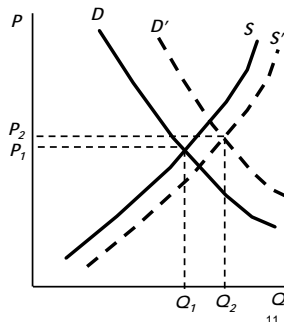


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Changes in Market Equilibrium [M, Fig. 2.6, p. 26]

- Income increases and raw material prices fall
 - Quantity increases
 - If the increase in D is greater than the increase in S price also increases



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Elasticities of Supply and Demand

- Elasticity is a measure by how much a variable will change with the change in another variable
- Elasticity gives the percentage change in one variable resulting from a one percent change in another
- Elasticity of Supply & Elasticity of Demand:

$$E_P^S = \frac{\% \Delta Q_S}{\% \Delta P}$$

$$E_P^D = \frac{\% \Delta Q_D}{\% \Delta P}$$

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Price Elasticity of Demand

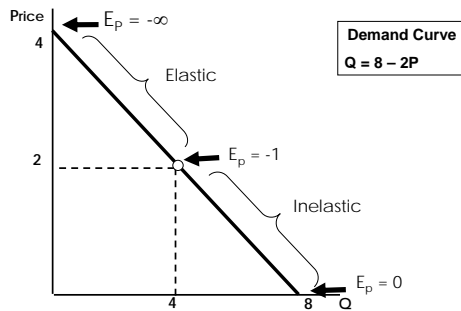
- Usually a negative number
 - As price ↑, quantity ↓
 - As price ↓, quantity ↑
- When $|E_p| > 1$, the good is price elastic: $|\% \Delta Q| > |\% \Delta P|$
- When $|E_p| < 1$, the good is price inelastic: $|\% \Delta Q| < |\% \Delta P|$
- Elasticity can also be written as:

$$E_p^D = \frac{\Delta Q / Q}{\Delta P / P} = \frac{P \Delta Q}{Q \Delta P}$$

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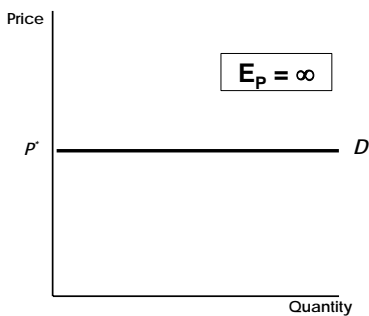
Price Elasticity of Demand



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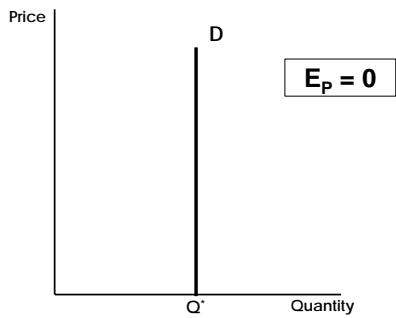
Infinitely Elastic Demand



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Completely Inelastic Demand



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Other Demand Elasticities: Income Elasticity of Demand

- Income Elasticity of Demand
 - Measures how much quantity demanded changes with a change in income

$$E_I = \frac{\Delta Q/Q}{\Delta I/I} = \frac{I}{Q} \frac{\Delta Q}{\Delta I}$$

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Other Demand Elasticities: Cross-Price Elasticity of Demand

- Cross-Price Elasticity of Demand
 - Measures the percentage change in the quantity demanded of one good that results from a one percent change in the price of another good

$$E_{Q_b P_m} = \frac{\Delta Q_b / Q_b}{\Delta P_m / P_m} = \frac{P_m}{Q_b} \frac{\Delta Q_b}{\Delta P_m}$$

(the subscript "b" stands for butter, and "m" for margarine)

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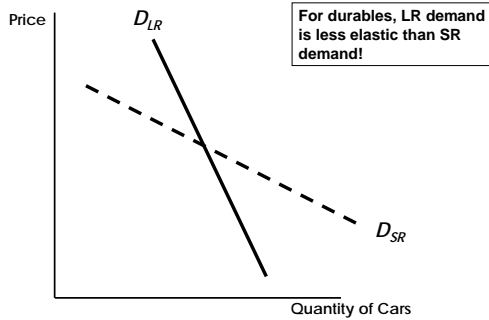
Short-Run Versus Long-Run: SR vs LR Elasticity

- Price elasticity varies with the amount of time consumers have to respond to a price
- Short-run demand and supply curves often look very different from their long-run counterparts
- Demand
 - In general, demand is much more price elastic in LR
 - Consumers take time to adjust consumption habits
 - Demand might be linked to another good that changes slowly
 - More substitutes are usually available in LR

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SR & LR demand for durables: Cars: SR and LR



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SR Versus LR: Elasticity

- Income elasticity also varies with the amount of time consumers have to respond to an income change
 - For most goods and services, income elasticity is larger in LR (because when income changes, it takes time to adjust spending)

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Summary of Today & Plan for the Next Lecture

- Organizational Matters:
 - Home Assignment 1 will be posted on the web on Saturday, due date: Tuesday lecture, 19.09.2006
 - Course web will be connected to the econ. department web page
- Summary of today's lecture: Concepts
 - Nominal and real prices, CPI
 - Surplus and Shortage
 - Elasticity of: Demand, Supply, ...
 - Short run [SR] and Long run [LR]
 - SR and LR elasticities
 - demand elasticity
 - income elasticity
- Your preparation: read ch. 2 (and 3)
- Next week / lecture
 - Price controls
 - Consumer preferences
 - Budget constraint
- Have a Nice Day and a Great Labor Day Weekend

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