ECC2000 Intermediate Microeconomics

Exam Study Guide

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Lecture 1: Introduction

Models

- Assumptions
- Simplifications/Abstractions
- "As if" principle
- Theory is judged by its predictive power
- Models in economics can be useful even if not accurate

Why Economics

- Scarcity
  - Natural man-made resources
  - labour, time
- Resources are limited BUT Wants are unlimited!
- Economics deals with how to allocate limited resources to satisfy unlimited human wants

1.1 Marginal Analysis

The Economic Way of Thinking

- If the marginal (additional) benefit of an action is greater than the marginal cost → DO IT
- If the marginal cost is greater than the marginal benefit → DON'T DO IT

Marginal Analysis

- Marginal = the next unit
- Marginal Analysis focuses upon whether the control variable should be increased by one more unit or not to maximise net benefit
- Key: look only at the changes in total benefits and total costs

Mathematically

Net Benefits (NB) = Total Benefits (TB) - Total Costs (TC)

NB is maximized when $\partial NB / \partial Q_{cv} = 0$

where cv = control variable

$NB / \partial Q_{cv} = \partial TB / \partial Q_{cv} - \partial TC / \partial Q_{cv}$

Marginal Benefit (MB) Marginal Cost (MC)

Net benefit is maximized when MB=MC

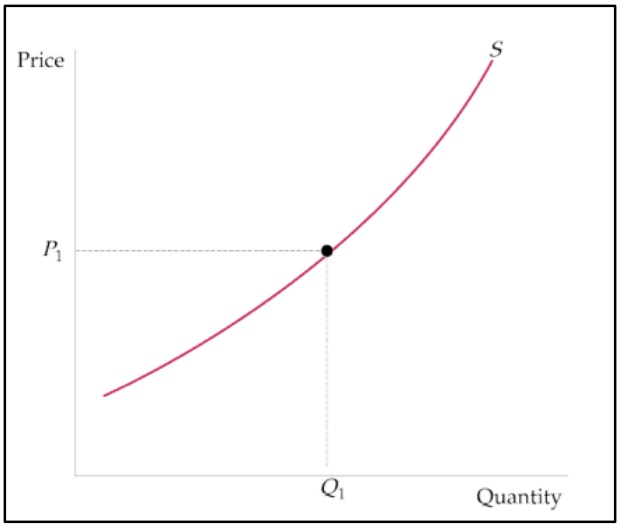
If MB>MC: $\partial NB / \partial Q_{cv} > 0 \rightarrow$ NB is increasing in Q

If MB<MC: $\partial NB / \partial Q_{cv} < 0 \rightarrow$ NB is decreasing in Q

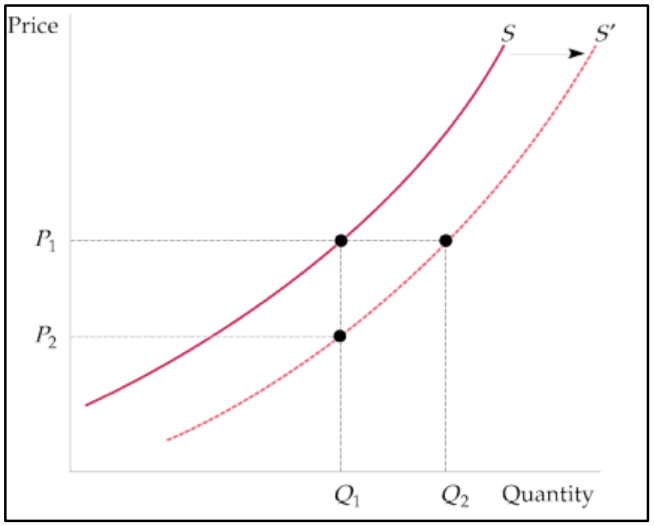
1.2 Supply-Demand Analysis

The Supply Curve

- Relationship (not on-way-causation) between the quantity of a good that producers are willing to sell and the price of the good

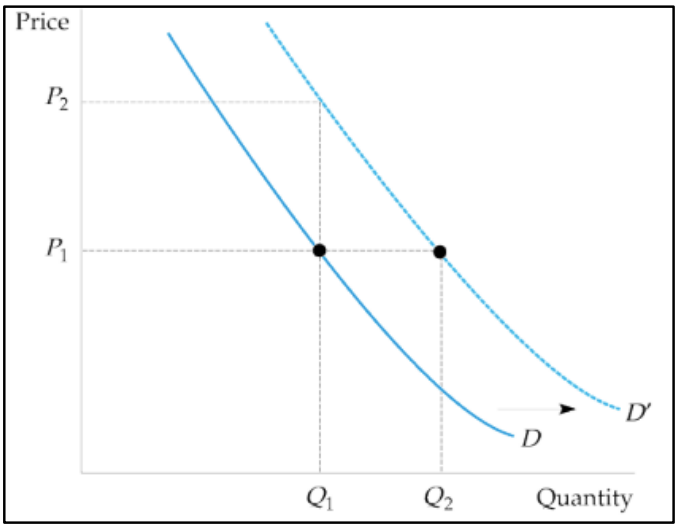


- Factors that affect supply:
  - production costs (wages, interest charges, costs of raw materials)
- Change in Supply vs. Change in the Quantity Supplied (same for Demand)
  - Change in Supply: shifts in the supply curve
  - Change in the Quantity Supplied: movements along the supply curve



The Demand Curve

- Relationship between the quantity of a good that consumers are willing and able to buy and the price of the good



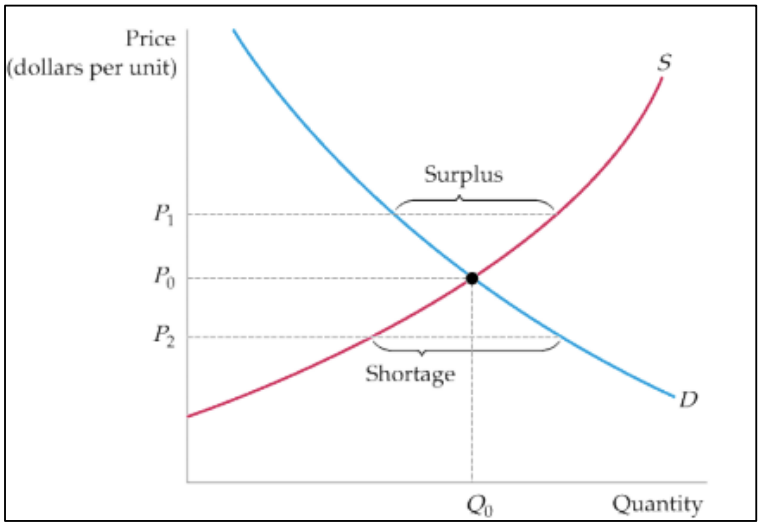
- Variables that affect Demand
  - Income
  - Prices of other goods (Substitute Goods, Complementary Goods)

Substitute Goods vs. Complementary Goods

- Substitute Goods: Two goods for which an increase in the price of one leads to an increase in the quantity demanded of the other
  - eg. Chicken and Beef
- Complementary Goods: Two goods for which an increase in the price of one leaders to a decrease in the quantity of the other
  - eg. Movie Ticket and Popcorn

Market Equilibrium

- Market clearing price where quantity demanded equals quantity supplied

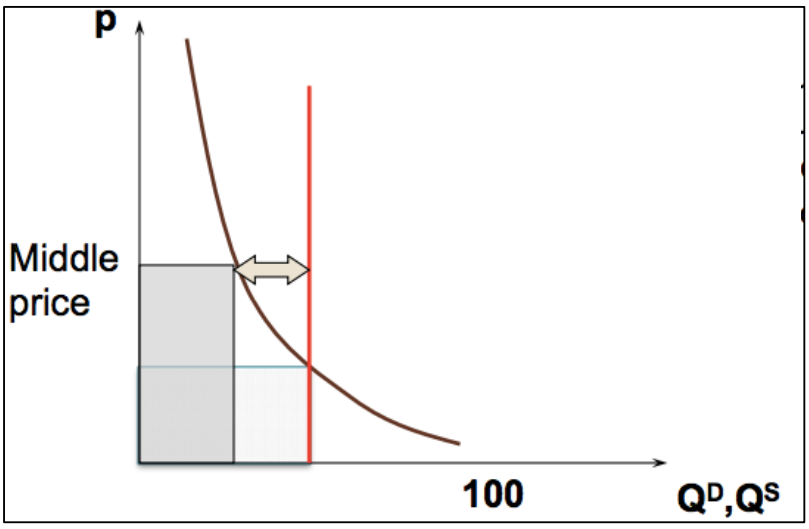


What did we assume in the analysis above?

- The market is at least roughly competitive
  - both sellers and buyers should have little market power (little ability individually to affect the market price)

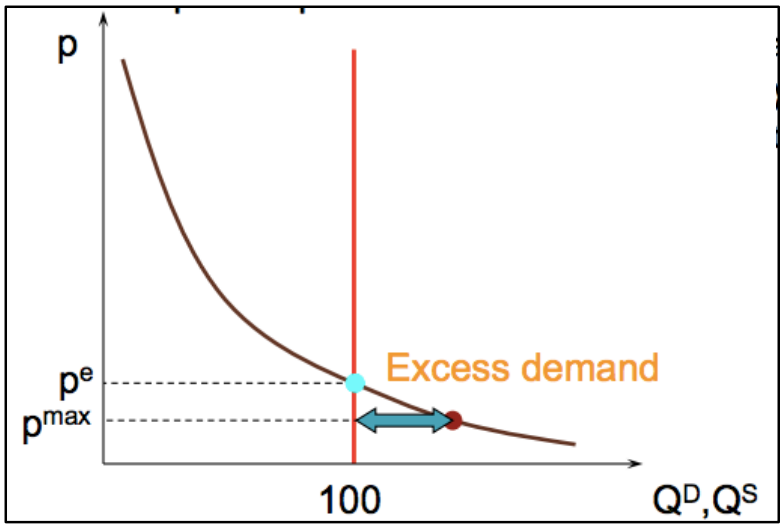
Monopoly Equilibrium

- Suppose instead that supply were controlled by a single producer (a monopolists)
- Example: Rental Market with fixed supply
- Monopolist Market Equilibrium:
  - middle price
  - medium quantity demanded
  - larger revenue
- Monopolist does not rent out all apartments → Vacant apartments



Rent Control

- Local government imposes a maximum legal price below the competitive price



1.3 Elasticity

Elasticity

- Percentage change in one variable resulting from a 1% increase in another
  - Elastic: the percentage change is large
  - Inelastic: the percentage change is small

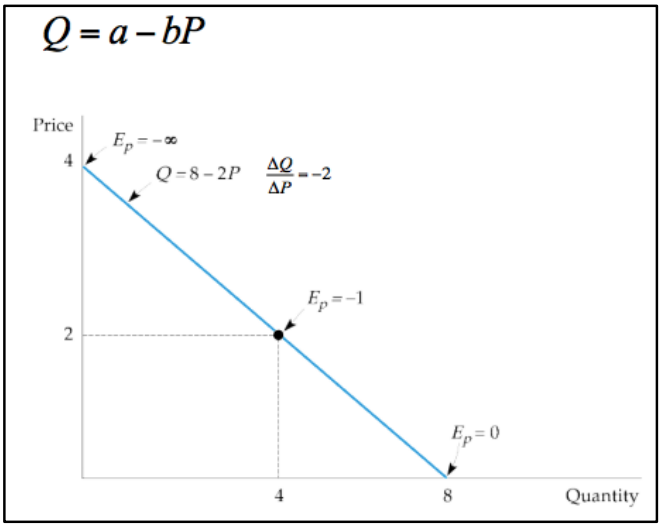
Price Elasticity of Demand

- The percentage change in quantity demanded of a good resulting from a 1% increase in its price

$$E_p = (\%\Delta Q)/(\%\Delta P)$$

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

- The slope of a linear demand curve is constant but it does not have constant elasticity
- The price elasticity of demand depends not only on the slop of the demand curve but also on the price and quantity
  - Elastic for higher prices
  - Inelastic for lower prices
- Note: Revenue is maximised where Demand Elasticity = 1



Income Elasticity of Demand

- Percentage change in the quantity demanded resulting from a 1% increase in income

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

Cross-Price Elasticity of Demand

- Percentage change in the quantity demanded of one good resulting from a 1% increase in the price of another
- Substitutes: Positive
- Complements: Negative

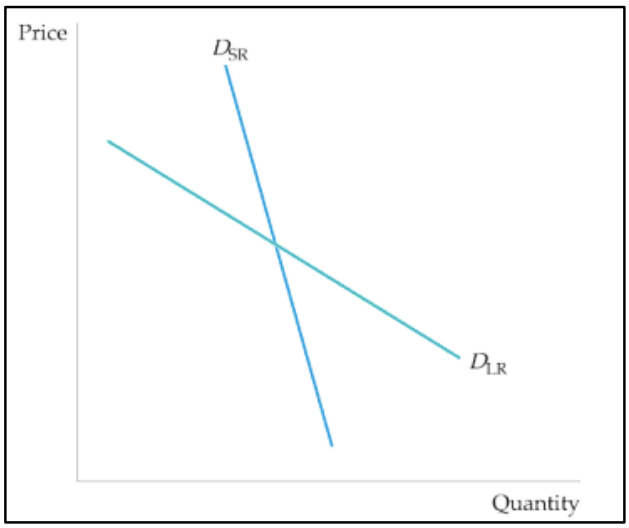
$$E_{Q_b P_m} = \frac{\Delta Q_b / Q_b}{\Delta P_m / P_m} = \frac{P_m}{Q_b}\frac{\Delta Q_b}{\Delta P_m}$$

Price Elasticity of Supply

- Percentage change in quantity supplied resulting from a 1% increase in price

Short Run vs. Long Run Elasticity

- Non-durable goods
  - change of consumption pattern takes time



- Opposite for durable goods
  - consumers delay purchases

Positive vs. Normative Analysis

- Positive: Examines the economic consequences of a policy
- Normative: Determines whether a policy should be used

National Market

- Buyers are willing to travel for cheaper prices
- Potential for arbitrage
  - taking advantage of price differences created in a world or national market
  - buying at a low price in one location and selling at a higher price in another location

Cyclical Industry

- An industry that manufactures products whose demand fluctuate sharply in response to short-run changes in income