Review Notes - Micro Review

• Definitions
  ▪ What is Economics? Microeconomics? Macroeconomics?
  ▪ Scientific Method
  ▪ Positive versus Normative Analysis/Statements
  ▪ Opportunity Costs
  ▪ Scarcity
  ▪ Rationality
  ▪ Real versus Nominal Prices

• Production Possibility Frontier Model
  ▪ assumption of the model
    • scarcity
  ▪ understanding the model
    • what does the frontier represent/how does it divide up the production space?
    • how does the frontier move?
    • increase or decrease in technology?
    • increase or decrease in resources?
    • how is opportunity costs demonstrated in the model?
  ▪ What does the model show?
    • Scarcity
    • Technological efficiency and inefficiency
    • Unemployment and full employment of resources
    • Opportunity cost
    • Law of diminishing returns/law of increasing (opportunity) costs (what is the difference between the two?)
    • How choices made today affect future production possibilities

• Demand Defined
  ▪ definition
  ▪ the law of demand (as P increases => Q_d decreases)
    • Why?
      • substitution effect
      • income effect
    • absolute vs. relative price for the law of demand
• market demand

• Other influences on Demand
  • tastes and preferences: as they increase => D increases and reverse
  • income (Y)
    • normal goods: as Y increases => D increases and reverse
    • inferior goods: as Y increases => D decreases and reverse
  • the price of related goods
    • substitutes in consumption: as P_s increases => D increases and reverse
    • complements in consumption: as P_c increases => D decreases and reverse
  • the number of demanders (buyers) in a market: as # increases => D increases and reverse
  • expectations about the future: if expect P increase in the future => D increases in the present and vice versa

• Change in Demand (D) vs. change in Quantity Demanded (Q_d)

---

• Supply Defined
  • definition
  • the law of supply (as P increases => Q_s increases )
  • market supply

• Other influences on Supply (besides the good's own price)
  • costs of production: as costs increases => S decreases and reverse
    • technology: as tech. increases => costs decrease and reverse
    • input prices: as input prices increases => costs increase and reverse
  • the price of related goods
    • substitutes in production: as P_s increases => S decreases and reverse
    • complements in production: as P_c increases => S increases and reverse
  • the number of suppliers (firms) in a market: as # increases => S increases and reverse
  • expectations about the future: if expect P increases in the future => S decreases in the present and vice versa

• Change in Supply (S) vs. change in Quantity Supplied (Q_s)

• Demand and Supply as flow variables (vs. stock variables)

---

• Market equilibrium
  • Definitions
• equilibrium
• stable equilibrium

How does the market attain equilibrium?
• excess demand or a shortage
  o price competition among consumers
• excess supply or a surplus
  o price competition among suppliers

Predictions about equilibrium P and Q
• increase in D => what happens to equilibrium P and Q?
• decrease in D => what happens to equilibrium P and Q?
• increase in S => what happens to equilibrium P and Q?
• decrease in S => what happens to equilibrium P and Q?
• increase in D and increase in S => what happens to equilibrium P and Q?
• increase in D and decrease in S => what happens to equilibrium P and Q?
• decrease in D and increase in S => what happens to equilibrium P and Q?
• decrease in D and decrease in S => what happens to equilibrium P and Q?

Elasticity
Definition of 4 different types
• Price Elasticity of Demand (η)
• Price Elasticity of Supply (ηs)
• Income Elasticity of Demand (ηy)
• Cross Elasticity of Demand (ηx,y)

Interpretation of size and sign of the elasticity coefficient for each type of elasticity.
• sign
  o \(-\eta \ < \ 0 \ = \ \text{always}; \ \text{reflects \ the \ law \ of \ Demand} \ (\text{as \ P \ increases} \Rightarrow \ Q_d \ \text{decreases})\)
  o \(-\eta_s \ > \ 0 \ = \ \text{always}; \ \text{reflects \ the \ law \ of \ Supply} \ (\text{as \ P \ increases} \Rightarrow \ Q_s \ \text{increases})\)
  o \(-\eta_y; \ \text{if} \ \eta_y \ > \ 0 \ = \ \Rightarrow \ \text{as \ income \ increases,} \ Q_d \ \text{increases}, \Rightarrow \ \text{the \ good \ is} \ \text{normal.}\)
    
      \text{if} \ \eta_y \ < \ 0 \ = \ \Rightarrow \ \text{as \ income \ increases,} \ Q_d \ \text{decreases,} \Rightarrow \ \text{the \ good \ is} \ \text{inferior.}\)
  o \eta_{x,y}; \ \text{if} \ \eta_{x,y} \ > \ 0 \ as \ P_x \ \text{increases,} \ Q_d \ \text{of} \ y \ \text{increases} \Rightarrow \ x \ \text{and} \ y \ \text{are} \ \text{substitutes.}\)
    \text{if} \ \eta_{x,y} \ < \ 0 \ as \ P_x \ \text{increases,} \ Q_d \ \text{of} \ y \ \text{decreases} \Rightarrow \ x \ \text{and} \ y \ \text{are} \ \text{complements.}\)
    \text{if} \ \eta_{x,y} \ = \ 0 \ as \ P_x \ \text{increases,} \ Q_d \ \text{of} \ y \ \text{is} \ \text{constant} \Rightarrow \ x \ \text{and} \ y \ \text{are} \ \text{unrelated.}\)

- size
  - $-\eta$; if $\eta > 1$ => D is price elastic ($\Delta Q_d > \Delta P$).
    - if $\eta < 1$ => D is price inelastic ($\Delta Q_d < \Delta P$).
    - if $\eta = 1$ => D is unitarily elastic ($\Delta Q_d = \Delta P$).
  - $-\eta_s$; if $\eta_s > 1$ => S is price elastic ($\Delta Q_s > \Delta P$).
    - if $\eta_s < 1$ => S is price inelastic ($\Delta Q_s < \Delta P$).
    - if $\eta_s = 1$ => S is unitarily elastic ($\Delta Q_s = \Delta P$).
  - $-\eta_y$; if $|\eta_y| > 1$ => D is income elastic ($|\Delta Q_d| > |\Delta Y|$).
    - if $|\eta_y| < 1$ => D is income inelastic ($|\Delta Q_d| < |\Delta Y|$).
    - if $\eta_y > 1$ => the good is a luxury.
    - if $0 < \eta_y < 1$ => the good is a necessity.
  - $-\eta_{x,y}$; if $\eta_{x,y} > 0$ => as $\eta_{x,y}$ increases x and y become closer substitutes.
    - if $\eta_{x,y} < 0$ => as $\eta_{x,y}$ decreases (increases in absolute value) x and y become closer complements.

- make sure you know how to interpret elasticity coefficients
- likewise, make sure you understand the difference between arc and point elasticity formulas

---

- Efficiency
  - allocative efficiency and inefficiency
    - MSB and MSC (what are those?)
    - efficiency occurs where?
  - technological efficiency and inefficiency
    - definition

- Applications
  - Health Insurance
    - what is the impact of regular third-party health insurance?
      - to price and quantity?
      - allocative efficiency?