SUPPLY AND DEMAND

• Supplementary readings on S&D: Any good Microeconomics Principles (i.e., Econ 101) Textbook. Examples:
  – Parkin: “Microeconomics”
  – Mankiw: “Principles of Microeconomics”
  – Lipsey, Courant, & Ragan: “Microeconomics”
  – Samuelson & Nordhaus: “Microeconomics”
  – Baumol & Blinder: “Microeconomics: Principles and Policies”
MARKET DEMAND

• Schedule of quantities of a good/service that potential buyers are willing to purchase at different prices for that good/service during a specific period and at a specific location, holding everything else constant.
MARKET DEMAND

• NOTE:
  – Specific period
  – Specific location
  – Holding everything else constant
DEMAND SHIFTS: EXAMPLES

1. Effect of higher price of T-bones on demand for flanksteaks
2. Effect of lifting ban on alcohol sales to minors
3. Effect of higher price of jelly on demand for peanut butter
4. Effect of income tax cut
5. Effect of an expected drop in the price of computers
6. Public concerns about high cholesterol on demand for eggs
MARKET DEMAND

- **DEMAND shifts** if something else changes:
  - Number of potential buyers (Households)
  - Income ("purchasing power")
  - Tastes, habits, etc.
  - Government regulations (e.g., smoking ban)
  - Price expectations
  - Prices of related products
    - Substitutes in consumption
    - Complements in consumption
MARKET DEMAND

Demand ≠ Quantity Demanded
MARKET SUPPLY

• NOTE:
  – Specific period
  – Specific location
  – Holding everything else constant
MARKET SUPPLY

- Schedule of quantities of a good/service that potential sellers are willing to offer at different prices for that good/service during a certain period and at a certain location, holding everything else constant.
MARKET SUPPLY

• Supply shifts if something else changes:
  – Production costs
  – Weather
  – Government programs (e.g., CRP)
  – Technology
  – Prices of related products
    • Substitutes in production
    • Complements in production
SUPPLY SHIFTS: EXAMPLES

1. Effect of higher price of "durum" wheat on spaghetti supply
2. Effect of eliminating CRP on soybean supply
3. Effect of a new pest on supply of tomatoes
4. Effect of higher price for T-bones on supply of flanksteaks
5. Effect of higher price of lettuce on supply of spinach
MARKET SUPPLY

Supply ≠ Quantity Supplied
MARKET EQUILIBRIUM

EQUILIBRIUM PRICE determined by:

Quantity Supplied = Quantity Demanded
MARKET EQUILIBRIUM

Why care about elasticities?
- Price volatility
- Price dynamics
- Who gains/loses the most
INCOME ELASTICITY OF DEMAND

\[
\frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Income}}
\]
INCOME ELASTICITY OF DEMAND

\[ \frac{QA - QB}{0.5 \times (QA + QB)} \]
\[ \frac{IncomeA - IncomeB}{0.5 \times (IncomeA + IncomeB)} \]
INCOME ELASTICITY OF DEMAND

- $< 0$ "inferior" goods
- $> 0$ "normal" goods
  - "necessities" (e.g., between 0 and 1)
  - "luxuries" (e.g., greater than 1)
OWN-PRICE DEMAND ELASTICITY

% Change in Quantity Demanded
% Change in Own Price
OWN-PRICE DEMAND ELASTICITY

\[
\frac{QA - QB}{0.5 \times (QA + QB)} \div \frac{PA - PB}{0.5 \times (PA + PB)}
\]
OWN-PRICE DEMAND ELASTICITY

- $> 1$ in abs. value: "elastic" demand
- $< 1$ in abs. value: "inelastic" demand
- $= 1$ in abs. value: "unitary-elastic" demand
CROSS-PRICE ELASTICITY OF DEMAND

\[
\frac{\% \text{ Change in Quantity Demanded of Good } i}{\% \text{ Change in Price of Good } j}
\]
CROSS-PRICE ELASTICITY OF DEMAND

\[
\frac{Q_a - Q_b}{0.5 \times (Q_a + Q_b)} \quad \frac{P_{ja} - P_{jb}}{0.5 \times (P_{ja} + P_{jb})}
\]
CROSS-PRICE ELASTICITY OF DEMAND

• $< 0$ complements in consumption
• $> 0$ substitutes in consumption
OWN-PRICE SUPPLY ELASTICITY

\[
\frac{\% \text{ Change in Quantity Supplied}}{\% \text{ Change in Own Price}}
\]
OWN-PRICE SUPPLY ELASTICITY

\[
\frac{QA - QB}{0.5 \times (QA + QB)} \quad \frac{PA - PB}{0.5 \times (PA + PB)}
\]
OWN-PRICE SUPPLY ELASTICITY

- $> 1$  “elastic” supply
- $< 1$  “inelastic” supply
- $= 1$  “unitary-elastic” supply
CROSS-PRICE ELASTICITY OF SUPPLY

\[
\frac{\% \text{ Change in Quantity Supplied of Product } i}{\% \text{ Change in Price of Product } j}
\]
CROSS-PRICE ELASTICITY OF SUPPLY

\[
\frac{Q_iA - Q_iB}{0.5 \times (Q_iA + Q_iB)} \frac{P_jA - P_jB}{0.5 \times (P_jA + P_jB)}
\]
CROSS-PRICE ELASTICITY OF SUPPLY

- $> 0$ complements in production
- $< 0$ substitutes in production