CHAPTER 1: AN INTRODUCTION TO ECONOMIC ANALYSIS

1.4 A Structure

- Microeconomics: the study of markets and their consequences, choices made by consumers and firms, and the role of government in influencing the outcome of markets (all on an individual basis)
- Macroeconomics: the study of the economy as a whole
    - Central topics: unemployment, inflation, economic growth, and related economic policies

1.5 The Beginning of Economics Analysis

- Labor force: includes those with a job and those who want a job but don't have one
- Capital (or physical capital): factories, machines, inventories, and tools in an economy; used in producing other goods and services
- Economic resources: labor, capital, and natural resources that can be used to produce goods and services
- Scarcity: when our wants are greater than our abilities to satisfy them; this necessitates making choices about how we use our resources
    - Anything becomes scarce if it uses resources that have an alternative use
    - EX: automobiles are scarce
        - Doesn't mean that they are hard to find or buy
        - Means that we have to give up what could be produced with those resources we use to produce automobiles
- "What" to produce? → as many goods and services as possible, but also the ones we enjoy the most
- "How" to produce? → whatever combination of machines, labor, land, etc. will minimize the cost of production
- "For whom" to produce? → those willing and able to pay

1.6 The Result of Scarcity -- Opportunity Cost

- Opportunity cost: what one gives up doing when making a choice; the value of the best forgone opportunity (the one best alternative to the choice we make)
- Sunk cost: a cost that has already been paid and cannot be recovered
- Fixed cost: a cost that does not change as one makes a decision
    - EX: have to pay insurance no matter what

6.6 A Downward-Sloping Demand Curve

- When the price of a certain good increases, a consumer will change their consumption patterns accordingly, causing the marginal utility of that good to increase because the consumer will decrease their consumption of the good

6.7 Income and Substitution Effects

- Real income: income adjusted for price changes; a measure of the amount of goods and services one can purchase
- For real income (w/ an inferior good):
    - If price increases, quantity increases
    - If price decreases, quantity decreases
- Opposite effects w/ a normal good
- Effect of a change in real income on how much you buy depends upon the portion of income you spend on the good w/ the changing price
    - If it's a lot, the effect will also be a lot
- Income effect?
    - If the price of a good falls, then consumers have more real income. If, as income increases, the consumption of a good falls, that good must be an inferior good.
- Substitution effect?
- The substitution effect of a price change is always inversely related to the quantity change. The substitution effect and income effect work in the same direction for normal goods, so a higher price leads to lower quantity demanded. For an inferior good, the income and substitution effect work in opposite directions, but the substitution effect almost always is larger than the income effect, so the result if still lower quantity demanded when the price of a good rises.

6.8 Consumer Surplus

- Consumer surplus: the difference between the total value to the consumer of consuming a specific amount of a good and the amount the consumer must pay for that amount of the good
    - For each unit purchased, consumer surplus = price consumer is willing to pay - price the consumer actually has to pay
- On an individual demand curve, the consumer surplus will be the area above the paid price and under the demand curve

6.9 The Paradox of Value

- Given a demand curve:

CHAPTER 10: MONOPOLY

10.2 What is a Monopoly?

- Monopoly: a single firm in an industry with barriers to entry and no close substitute goods
    - Very difficult to find a real-life ex.

10.3 Reasons for Monopolies' Survival

- Most often, monopolies arise through legal or economic barriers to entry
- Sometimes, a firm owns a particular resource, which gives the firm complete control of production or distribution
- Ex. of legal barriers to entry: cities/states grant rights to firms to be sole providers of water, electricity, etc.
- Sometimes legal protection is given to incentivize firms to create new products (like a patent)
    - Common in drug industry
- A firm can establish a monopoly by being the only firm with access to a natural resource OR by being the only company with great tech. advances
- Monopoly can occur if there is a huge investment required to enter the market

10.4 Market Demand and Marginal Revenue

- Monopoly described as a "price-maker"
    - Unlike in a perfectly competitive market, a monopolistic firm can change the market price
- If a monopoly decreases price, effect on revenue is the gain from the sale of one more good (new price of good x quantity sold) - amount of revenue lost because the rest of production is now sold at a lower price
    - Marginal revenue does not equal price
    - Marginal revenue always < price
- Marginal revenue = (Δ revenue) ÷ (Δ quantity sold)

10.5 Profit Maximization for a Monopolist

- [graph in notes]
- Once a firm decides on the profit-maximizing level of output, the firm determines price to charge
    - Price will be the max. price they can charge while still selling all of their output at profit-max level
- Economic profit per unit produced = difference between price and average total cost

CHAPTER 14: MARKETS FOR LABOR

14.2 Changes in Incomes

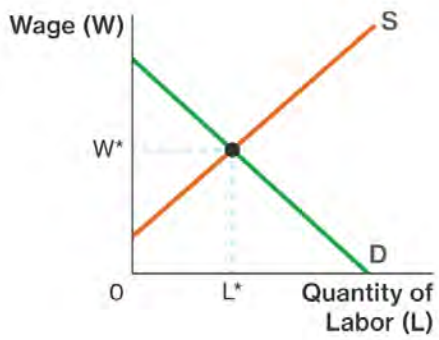
- The wages and income we earn from jobs are determined in markets for labor
- In 2015, U.S. poverty rate was 13.5%
    - A major goal of economic policy is to reduce poverty rates

14.3 Definitions of Wages

- Wages have increased dramatically over the last 35 years
    - But how much of this is due to inflation?
- Real wages: the nominal wage adjusted for the effects of inflation
    - Nominal wage: aka wages paid
    - An increase in real wages means you can buy more than you did before
- Wages most often refers to the money paid to a worker, but don't forget most workers also receive fringe benefits such as health insurance, sick pay, retirement benefits, and vacation days off (should be included in our analysis)

14.4 A Preview of Markets for Labor

- Role reversal in the labor market: individuals supply the labor and firms demand labor



14.5 Demand for Labor

- Derived demand: demand that is derived from the demand for something else
    - The demands for inputs into the production process are derived from the demand for the goods and services that they produce
        - Consumers demand a firm's goods → firm demands labor to produce these goods
- Diminishing marginal productivity of labor: as we hire an additional worker, the additional output created by the worker increases total output, but is smaller and smaller for each additional worker
    - Adding more workers to a fixed amount of capital results in higher

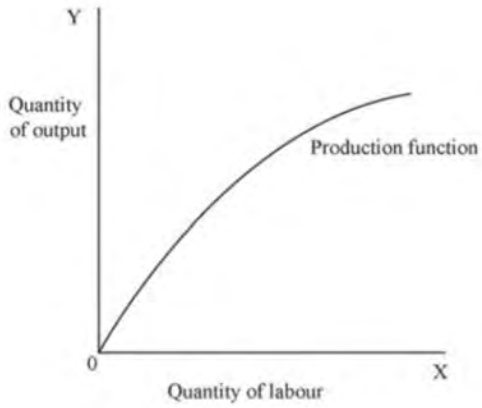


Figure 1

- Stock indexes are a type of average

17.8 Stocks

- Companies issue shares of stock as a means of raising the funds needed to purchase physical capital
    - By doing so, companies are selling part of the ownership of their company
- Return: the income earned on a stock
    - Consists of the current and future dividends (profit) and possible appreciation in the value of the stock as the company increases in value
- Rate of return = (sum of dividends & appreciation in stock value) ÷ (price paid for stock)
    - Normally expressed as an annual rate
    - Expressed as a %
- Dividend yield = (dividend) ÷ (price of stock)
    - Expressed as a %
- Capital gain: an increase in the market price of a share of stock
    - Often expressed as a % of purchase price
    - Capital loss: a fall in stock price
    - A capital gain tax is due when a stock is sold
- Stock prices in an industry increase if future profits are expected to increase
    - Applies to the market as a whole, specific industries, and individual companies
- Price-earnings ratio: (the price of a stock) ÷ (its annual earnings per share)
    - Used as a crude tool to show relationship between earnings and stock price
    - Earnings: the accounting profits of the firm
- If price-earnings ratio increases, we can expect stock price to increase too
- The greater the opportunity cost (like an alternative interest rate), the less valuable a financial investment will be
    - So, changes in expected rates of return of other investments will affect stock prices
- Impossible to say whether an increase in dividends will positively affect stock prices
- Expected rate of return = (expected annual dividends + expected appreciation in price) ÷ (current price of a share of stock)

17.9 Risk Versus Rate of Return

- Risk: the volatility of the price or return of a financial instrument