Ganpat University | Institute of Computer Technology

॥ विद्या समाजोत्कर्षः ॥

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Ganpat University – Institute of Computer Technology

Course on: Entrepreneurship Development (2HS309)

Markets Economies

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For, Innodesk Designovation Services

एक कदम **#आत्मनिर्भर भारत** की ओर...

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Market competitiveness

- The market in the classical world:
- **perfectly competitive:**
  - many buyers and sellers
  - all units of the good are identical
  - free entry and exit
  - perfect information
- **self-correcting market:**
  - automatically adjusts to any imbalances between sellers (supply) and buyers (demand)

The Characteristics of Perfect Competition

1: Many Buyers and Sellers

2: Standardized Product

3: Freedom to Enter and Exit Markets

4: Independent Buyers and Sellers

5: Well-informed Buyers and Sellers

The Characteristics of Perfect Competition

- Characteristic 1: Many Buyers and Sellers
  - No one buyer or seller has power to control price in the market
  - Many sellers means buyers can choose a producer with better price
  - Many buyers means sellers can all sell product at market price
    - lack of demand will not cause sellers to lower prices

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The Characteristics of Perfect Competition

- Characteristic 2: Standardized Product
  - Standardized product—one producer's product is identical to another's
  - Perfect substitutes include
    - agricultural products, such as wheat, eggs, milk
    - basic commodities, such as notebook paper, gold
  - Price is only basis for consumer choice

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The Characteristics of Perfect Competition

- Characteristic 3: Freedom to Enter and Exit Markets
  - Producers can enter market when profitable and exit when unprofitable
  - Regulations do not restrict businesses from entering or exiting

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The Characteristics of Perfect Competition

- Characteristic 4: Independent Buyers and Sellers
  - Neither buyers nor sellers join together to influence price
  - Supply and demand set the equilibrium price
  - Independent action ensures that market stays competitive

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The Characteristics of Perfect Competition

- Characteristic 5: Well-informed Buyers and Sellers
  - Buyers can compare prices
  - Sellers know what competitors charge, what buyers willing to pay
  - Price taker—seller that accepts market price set by supply and demand

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Competition in the Real World

- KEY CONCEPTS
  - No perfectly competitive markets; none meet all conditions
  - Imperfect competition—market structures that lack one or more of the conditions
  - Some markets come close, such as some wholesale farm products

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Competition in the Real World

- Example 1: Corn
  - Thousands of growers; decide only how much to produce at market price
  - Many buyers; standardized product; wholesale price easy to determine
  - In reality, several factors can interfere:
    - government subsidies; farmers or buyers sometimes band together

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Characteristics of a Monopoly

- KEY CONCEPTS
  - Monopoly—market structure with one seller, no substitutes for product
  - Cartel—organization of sellers that agree to set prices, limit output
  - Price maker—business without competitors, can set prices
  - Barrier to entry—obstacle to entering market
    - include government regulations, size, resources, technology

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Types of Monopolies

- KEY CONCEPTS
  - Natural monopoly—cost of production lowest with only one producer
  - Government monopoly—government owns and runs or permits only one producer
  - Technological monopoly—one firm owns invention, technology, method
  - Geographic monopoly—no other sellers within a region

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Types of Monopolies

- Example 1: Natural Monopoly: A Water Company
  - In some markets, inefficient to have companies competing
  - Example: public utilities that require complex systems
    - economies of scale—average production cost falls as production grows
  - Government both supports and regulates

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Types of Monopolies

- Example 2: Government Monopoly: The Postal Service
  - Government runs some businesses that provide goods and services
    - private firms cannot or do not want to provide because of low profits
  - Example: Postal Service has sole right to deliver first-class mail
  - New services and technologies now compete
    - private delivery companies, fax, e-mail, online bill paying

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Types of Monopolies

- Example 3: Technological Monopoly: Polaroid
  - Patent—legal registration of invention; gives inventor sole rights
    - enables businesses to recover costs of development
  - Monopoly lasts for time limit of patent or until substitute invented
  - Patent let Polaroid keep Kodak out of instant-photography market
    - simpler cameras, digital cameras, quick processing reduced its market

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Types of Monopolies

- Example 4: Geographic Monopoly: Professional Sports
  - Sports leagues tie teams to cities, regions; limit number of teams
    - owners can charge high ticket prices, sell team merchandise
  - Physical isolation—no other supplier in area—lets owner control prices
  - Very small market may not support two businesses of same type

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Characteristics of an Oligopoly

- KEY CONCEPTS
  - Oligopoly—market structure with only a few sellers offering similar product
  - Less competitive than monopolistic competition
    - each firm has large market share—percent of total sales in the market
  - Few firms due to high start-up costs—expenses of entering market

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Characteristics of an Oligopoly

1: Few Sellers and Many Buyers

2: Standardized or Differentiated Products

3: More Control of Prices

4: Little Freedom to Enter or Exit Market

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Characteristics of an Oligopoly

- Characteristic 1: Few Sellers and Many Buyers
  - A few firms dominate market
    - industry is oligopoly if four firms control 40 percent of market
  - About half of manufacturing industries in United States are oligopolies
    - include breakfast cereals, soft drinks, movies, industrial products

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Characteristics of an Oligopoly

- Characteristic 2: Standardized or Differentiated Products
  - Many industrial products standardized such as flat glass, aluminum
    - firms differentiate by brand name, service, location
  - Many consumer goods are differentiated
    - use marketing strategies, such as focus groups, surveys
    - create brand-name products that can be marketed widely

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Characteristics of an Oligopoly

- Characteristic 3: More Control of Prices
  - Each firm's decisions about supply and price affect entire market
  - If one firm lowers prices, others probably will too
    - no firm gains market share from price drop; all risk losing profits
  - If one raises prices, others may not in order to gain market share
  - Anticipate competitors' response to price, output, marketing changes

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Characteristics of an Oligopoly

- Characteristic 4: Little Freedom to Enter or Exit Market
  - High start-up costs—such as factories, warehouses—make entry hard
    - new firm may sell on small scale; hard to compete with established ones
  - Established firms have resources, patents, economies of scale
  - High investment by firms in oligopoly make exit difficult
    - operations too vast, complex to sell and reinvest easily

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GROSS DOMESTIC PRODUCT (GDP)

- Gross Domestic Product (GDP) is an economic measure of the market value of all the final goods produced and services delivered, inside the boundary of a nation during a year.
- This means that all the goods produced and services rendered within the territorial limits of a nation are included in GDP whether they are produced by the countries residents or non residents that is foreigners.
- GDP focuses on where the output is produced.

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GROSS DOMESTIC PRODUCT (AT MARKET PRICE) AND GROSS DOMESTIC PRODUCT (AT FACTOR COST)

- GDP at market price : It includes all final goods and services produced within the domestic territory of a country during any particular year.
- GDP at factor cost : It is the aggregate earning of different factors of production within the domestic territory of a country during any year.

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Difference between GDP at market price and GDP at factor cost

- We know that market price includes indirect taxes but they do not accrue to the factor income. However market price does not include subsidy element ,but this amount flows to the factors as factor income.
- $GDP_{fc} = GDP_{mp}$ –net indirect business taxes.

  $= GDP_{mp}$ –indirect business taxes +subsidy
- $GDP_{mp} = GDP_{fc}$ + net indirect business taxes.

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NET DOMESTIC PRODUCT (AT MARKET PRICE) AND NET DOMESTIC PRODUCT (AT FACTOR COST

- NDP at market price : It refers to the money value of all final goods and services inside the boundary of a country during any particular year after deducting the depreciation allowance.

  Thus ,NDPmp = GDPmp-Depreciation allowance
- NDP at factor cost : It measures the aggregate factor incomes of the residents and non-residents within the domestic territory of a country during any particular year after deducting the depreciation allowance.
- Thus, $NDP_{fc} = GDP_{fc}$ - Depreciation allowance

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GROSS NATIONAL PRODUCT (GNP)

- GNP is an economic measure of the aggregate value of the total final goods produced and services rendered by the country's residents and businesses, during a particular period.
- GNP includes the investment made by the residents both within the country and outside the country and excludes the income earned by the foreign nationals or businesses within the country.

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GROSS NATIONALPRODUCT (AT MARKET PRICE) AND GROSS NATIONAL PRODUCT (AT FACTOR COST)

- GNP at market price : It refers to the aggregate market value of all final goods and services produced by the residents of a country.
- GNP at factor cost : It is the aggregate earnings received by different factors of production supplied by the residents of a country during any particular year.
- $GNP_{fc} =$ GNPmp –net indirect business taxes.

  = GNPmp –indirect business taxes +subsidy
- $GNP_{mp} = GNP_{fc} +$ net indirect business taxes

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NET NATIONAL PRODUCT (AT MARKET PRICE) AND NET NATIONAL PRODUCT (AT FACTOR COST

- NNP at market price :It refers to the market value of all final goods and services after deducting the depreciation allowance.
- NNPmp = GNPmp-Depreciation allowance
- NNP at factor cost :It refers to the value of all final goods produced and services rendered by the residents of a country, whether operating inside the country or outside it ,at their factor cost.
- Thus, $NNP_{fc} = GNP_{fc}$ - Depreciation allowance

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DIFFERENCE BETWEEN GDP AND GNP

GDP

- GDP stands for Gross Domestic Product.
- GDP measures the domestic levels of production of goods and services in given period of time.
- It is a geographic concept.
- GDP shows the strength of the country's domestic economy.
- GDP is location based

GNP

- GNP stands for Gross National Products.
- GNP measures the level of production in given period of time of any person or corporation belonging to a country.
- It is an economic concept.
- GNP shows the contributions of residents towards country.
- GNP is citizenship based.

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Per Capita

- PER CAPITA NATIONAL INCOME : The amount received by dividing the national income of a particular year of any country by the total population of that period is called per capita national income.
- PERSONAL INCOME :The amount of income earn by a person in a fixed period of time by participating directly or indirectly in production and services is called personal income.
- DISPOSABLE PERSONAL INCOME : The residue contain after deducting direct tax from the personal income of any person is called disposable personal income.

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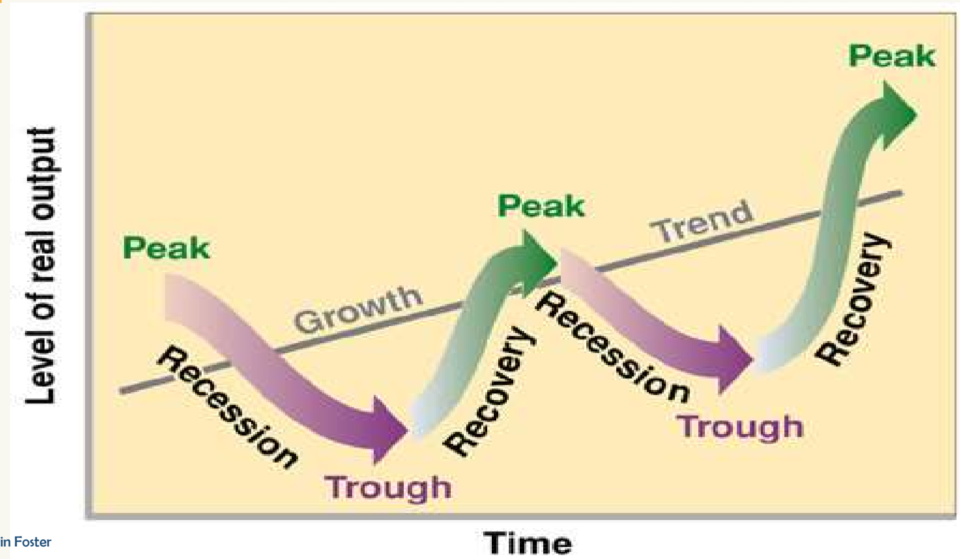
The Business Cycle



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The Business Cycle Illustrated:

- Peak
  - temporary maximum in Real GDP. At this point the unemployment rate (u%) is probably below the natural rate of unemployment, and the inflation rate (π%) is probably increasing.
- Recession
  - The contractionary phase of the business cycle. A period of decline in Real GDP accompanied by an increase in u%. To be classified as a recession, the economic decline must be at least 6 months long.
- Trough
  - The bottom of the business cycle. The u% is probably high and π% is probably low.
- Recovery
  - The phase of the business cycle where the economy is returning to full employment.

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The Business Cycle Illustrated:

- Important note
  - Not all countries are in the same place at the same time?
  - The various phases of the business cycle last for different amounts of time.
    - In recent history, expansions have lasted years longer than have recessions.
    - The Great Depression is the most notable example of a long recession/trough

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Inflation

- Inflation- increasing price levels.

- Changes in prices, employment and output are all linked to inflation

- Your purchasing power is linked to inflation.

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Degrees of inflation

Creeping:1-3%/year
Galloping: 100-300%/year
Hyper: 500% or more/year

Zimbabwe inflation
231 million %

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Causes of inflation

1. Cost push-Costs of inputs pushing up prices.
2. Demand pull-Too many dollars chasing too few goods.
3. Federal Government deficit spending.
4. Cost of labor increases cost of production.
5. Excessive money growth-loose money policy

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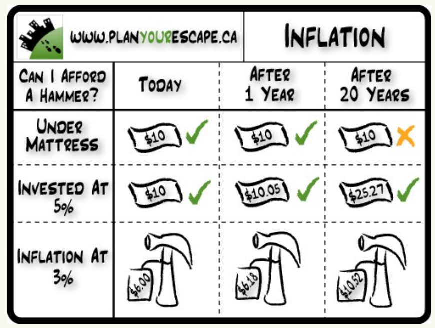
Consequences of inflation

1. The dollar buys less, purchasing power deceases as prices increase.
2. Changes in spending habits by consumers.
3. Investment speculation increases.
4. Creditors hurt, borrowers helped.



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- Deflation-Falling prices
  - Deflation is as bad as inflation. Why?

- Disinflation-the level of inflation is decreasing.

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Meaning and Definition of Quality Control

- Quality control means the process of control where the management tries to conform the nature and characteristics of the product in accordance with the pre-determined standards and specifications. It is a systematic control of those variables that affect the excellence of the ultimate product.
- It may be defined as that industrial management technique or group of techniques by means of which products of uniform acceptable nature are manufactured.

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Inspection- Examining Product Quality

- Inspection is the process of examining an object for identification or checking it for verification of quality and quantity in any of its characteristics. It is an important tool for ascertaining and controlling the quality of a product.
- According to Alford Beatty, " it is the art of applying tests preferably by the aid of measuring appliances to observe whether a given item or product is within the specified limits of variability or not".

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Objectives of Quality Control

- ❖To assess the quality
- ❖To see whether the product conforms to the predetermined standards
- ❖To locate the reason for deviations and to take necessary remedial steps
- ❖To suggest suitable improvements
- ❖To develop quality consciousness
- ❖To assess the various techniques
- ❖To reduce the wastage

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AGRMARK- Meaning

- The term agmark comprises of two word ‘ag’ and ‘mark’. Ag means agriculture and ‘mark’ means a certification mark.
- AGMARK is a certification mark employed mark employed on agricultural products in India, assuring that they conform to a set of standards approved by the Directorate of Marketing and Inspection, an agency of the Government of India.
- AGMARK is legally enforced in India by the Agricultural Produce(Grading and Marking) Act of 1937 (and amended in 1986).
- AGMARK standards cover quality guidelines for different commodities spanning a variety of pulses, cereals, essential oils, vegetable oils, fruits and vegetables and semi-processed products like vermicelli etc.

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Functions of Agmark

- It laid down same specification for the packing, i.e., which type of packing should be used for different type of products
- It also ensures that whatever is being packed should properly weighed and measured before packing
- The Agmark Standards have benefited both the producer and the consumer. It is possible for the producer to realize better prices for the product with these certification marks, as it ensures quality and guarantees the wholesomeness of the product for the consumer.

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ISI mark- Meaning

- ISI mark is a certification mark for industrial products in India. It is most popular and recognized certification mark in Indian sub continent.
- This mark ensures that the product confirms to the Indian standards mentioned by Indian Standard Institute.
- ISI is now known as BIS (Bureau of Indian Standards).
- It checks the quality and standard of every product and provides them certification mark.
- ISI mark is mandatory for certifying products to be sold in India.

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Role of ISI Mark

- The goods with ISI marks are subject to good quality control and testing
- They are produced as per the Indian Standard set by the BIS and thereby have assured quality and performance
- They are the best safeguards against impure, bogus and substandard commodities
- The ISI mark is a claim by the producer and is not a mere certificate
- The mark acts as a third party guarantee about the quality
- Manufactures are liable to punishment, if they use ISI mark fraudulently.

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Difference between ISI and AGMARK

ISI

- ISI- Indian Standard Institute
- ISI mark used to standardised a vaiety of products
- It given to items such as packaged water, milk powder, cement etc.
- It seal represents standardization

AGMARK

- It is an acronum for Agricultural Marketing
- Only agricultural product may apply for the agmark certification
- There are varied grading standards for different agricultural commodities
- It indicates the grade.

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ISO- Meaning

- The international organization for standardization is a specialized agency for standardization.
- It is a world wide federation of national standards bodies in-more than 100 countries.
- The Bureau of Indian Standards(BIS) is the national standards body of India represented on ISO.
- ISO is a based in Geneva, has over 200 technical committees to prepare international standards.
- It has the main objective of coordination and unification of international standards

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The Theory of Supply

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A supply schedule for coffee

Price (€/cup)	Cups of coffee supplied/week
0.70	300
0.80	400
0.90	500
1.00	600
1.10	700
1.20	800
1.30	900
1.40	1,000
1.50	1,100
1.60	1,200

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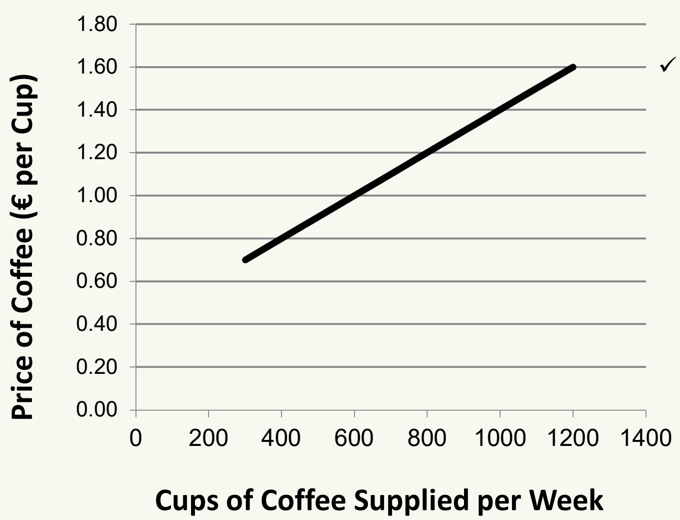
The supply curve for cups of coffee



- ✓ The supply curve shows the same information as the supply schedule. At higher prices, more cups of coffee are offered on the market by people who are in a position to sell.

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An increase in supply

- ✓ The supply curve shifts outward (to the right) when sellers decide to supply a larger quantity to the market at a given price, or to charge less for a given quantity.

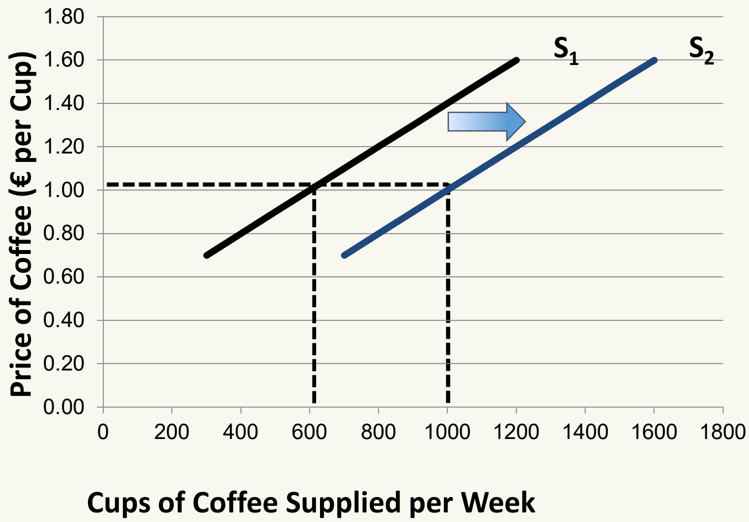

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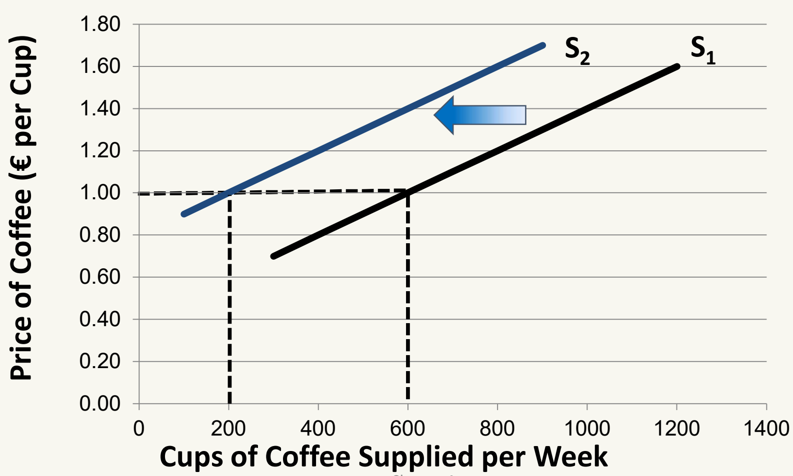
Figure 4.3 A decrease in supply

- ✓ The supply curve shifts backward (to the left) when sellers decide to supply a smaller quantity to the market at a given price, or to charge more for a given quantity.



Chapter 4

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The Theory of Demand

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Table 4.2 A demand schedule for coffee

Price (€/cup)	Cups of coffee demanded/week
0.20	1,000
0.50	900
0.80	800
1.10	700
1.40	600
1.70	500
2.00	400
2.30	300

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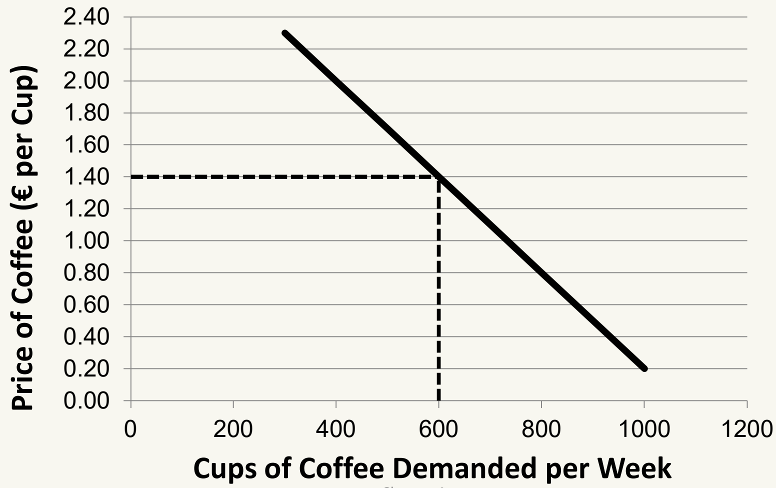
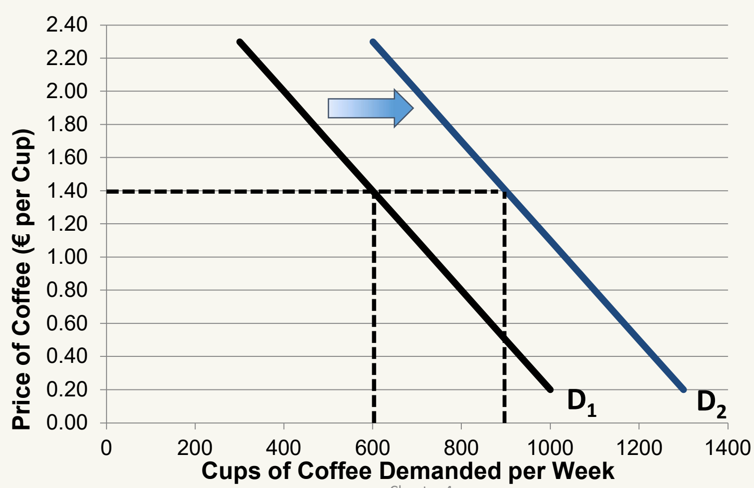
The demand curve for cups of coffee

✓ The demand curve shows the same information as the demand schedule. At higher prices, fewer cups of coffee are desired by people looking to buy.



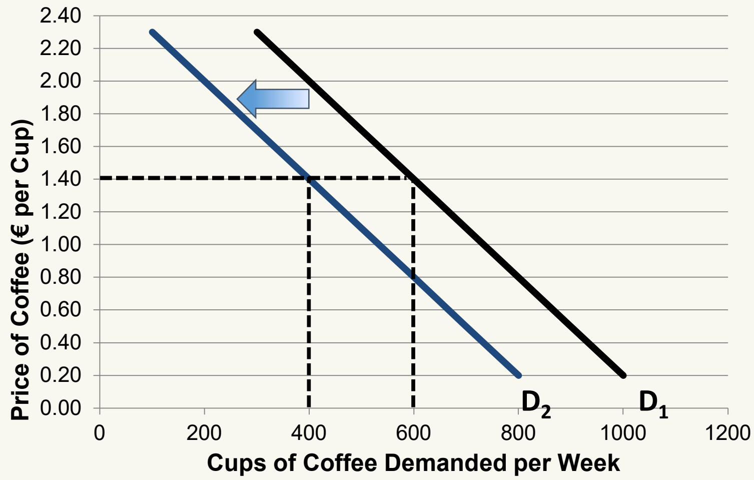
An increase in demand

✓ The demand curve shifts outward (to the right) when more buyers want to buy at a given price, or buyers are willing to pay a higher price for a given quantity.



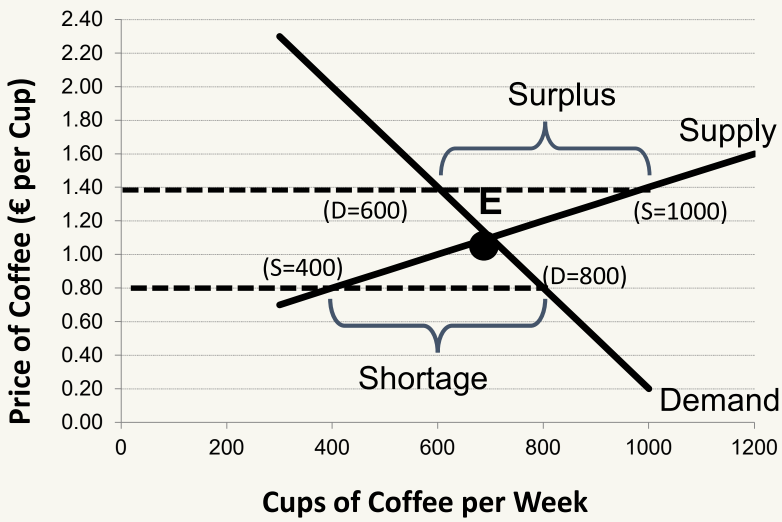
A decrease in demand

✓ When the demand curve shifts inward (to the left), we say that demand has decreased.



The Theory of Market Adjustment

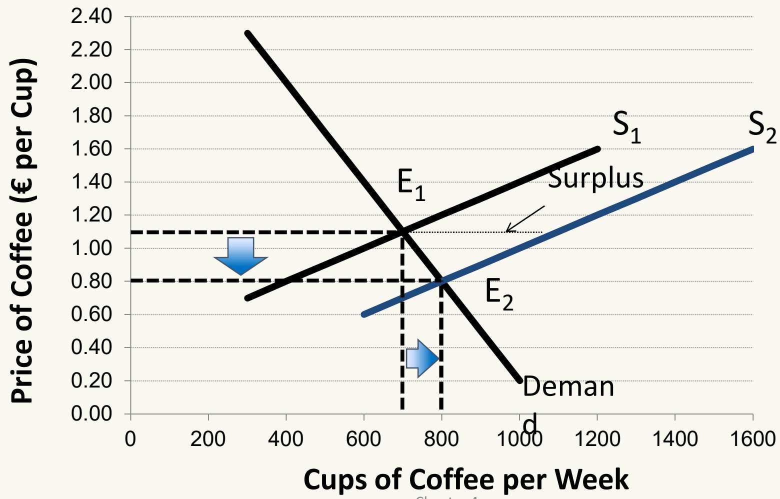
Surplus, shortage, and equilibrium



Surplus, shortage, and equilibrium

- at a price of €1.40 a surplus occurs because the quantity of cups of coffee being offered for sale is larger than the quantity that people want to buy
- on the other hand, at a price of €0.80 many people want to buy cups of coffee but few want to sell, so a shortage occurs
- only at market equilibrium (point E) does quantity supplied equal quantity demanded

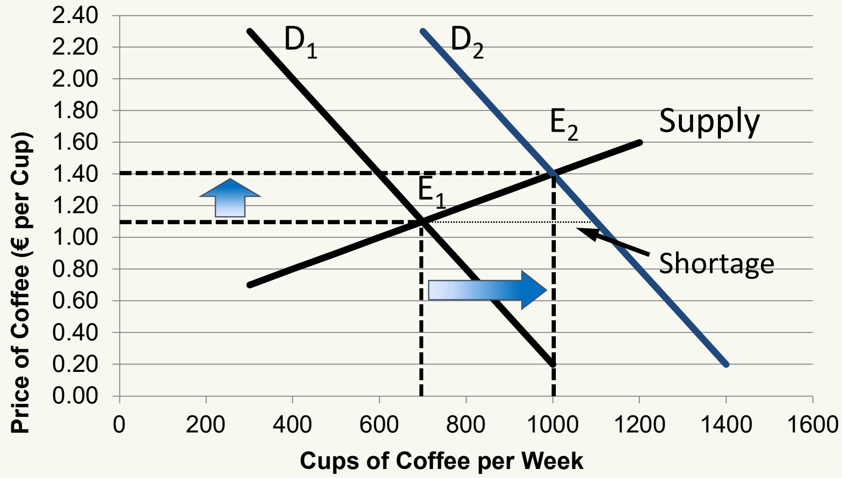
Market adjustment to an increase in supply



Market adjustment to an increase in supply

- with an increase in the supply of cups of coffee, there now would be a surplus at the original equilibrium price of €1.10
- market adjustment forces should cause the price to fall, until a new equilibrium is established at a price of €0.80. 700 cups of coffee will sell at this new equilibrium price
- the equilibrium price has fallen and the equilibrium quantity has risen

Market adjustment to an increase in demand



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Market adjustment to an increase in demand

- with an increase in demand, there would be a shortage of cups of coffee at the original equilibrium price of €1.10
- market forces should cause the price to rise, until a new equilibrium is established at €1.40 1000 cups of coffee will sell at this new equilibrium price
- the equilibrium price has risen and the equilibrium quantity has risen

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Elasticity

- when there is a change in market price, by how much will the equilibrium quantity change?
- the **price elasticity of demand** measures the degree to which buyers of a good respond to a change in its price

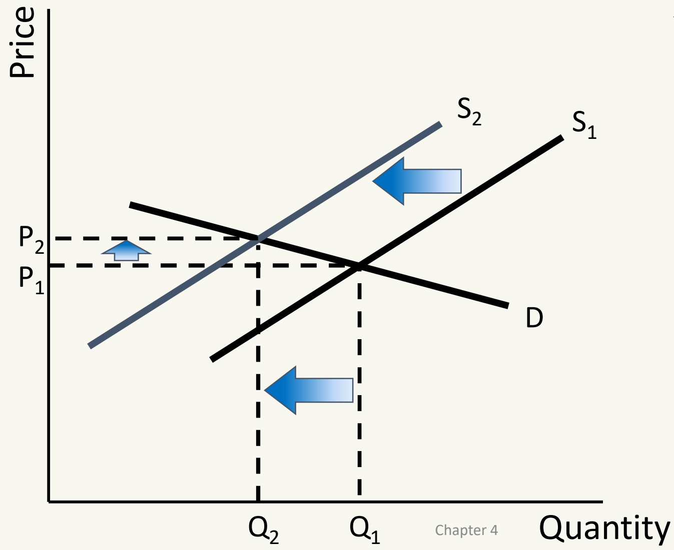
$$\text{Price elasticity of demand} = \left|\frac{\text{(\% change in quantity demanded)}}{\text{(\% change in price)}}\right|$$

Price elasticity of supply

- when suppliers respond to a small increase in price by offering a much larger quantity of goods, we say that supply is relatively elastic
- if they hardly react at all, supply is relatively inelastic

$$\text{Price elasticity of supply} = \left|\frac{\text{(\% change in quantity supplied)}}{\text{(\% change in price)}}\right|$$

Price elasticity of demand
(a) Relatively price-elastic demand



- ✓ When a small change in price leads buyers to make a large change in the quantity they demand, demand is said to be relatively elastic.

Chapter 4

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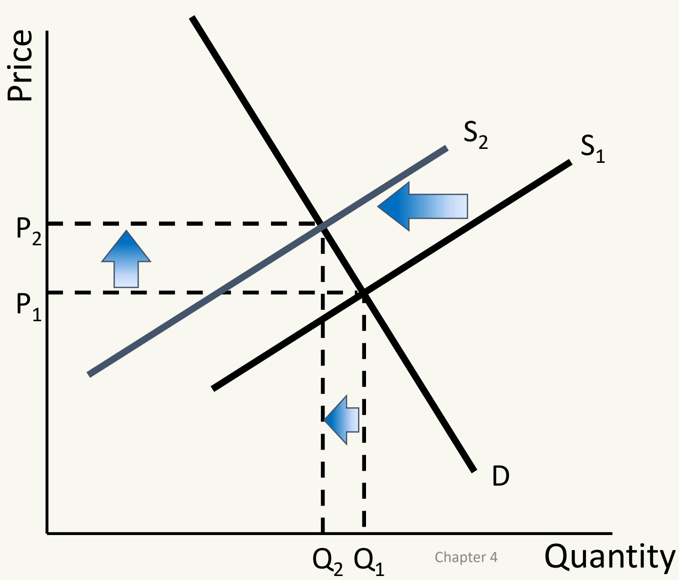
Price elasticity of demand
(b) Relatively price-inelastic demand.



- ✓ If buyers' response is weak, demand is said to be relatively inelastic.

Chapter 4

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What is a term sheet?

- It's a contract, but it does <u>not</u> represent a legal promise to invest.
- Outlines key terms of deal between VC and startup.
- First step in the transaction, material terms are negotiated and agreed to.
  - More detail is better – helps lawyers draft actual documents in the future.
  - Most focus on deal.
- Legal documents follow and are based on term sheet.
  - Stock purchase agreement, investors rights agreement, amendment to certificate of incorporation, ROFR & co-sale agreement, and voting agreement.

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Is a term sheet legally binding?

Look to tenets of contract law and intent of the parties	The term sheet is subject to the actual legal documents, due diligence, legal counsel, and other closing conditions. Parties usually explicitly state the term sheet is not legally binding. But, if deal goes through, the deal terms match the term sheet.
What parts are most commonly legally binding?	Confidentiality – the startup cannot disclose even the existence of the term sheet. Exclusivity – the startup cannot shop the deal around for a period of time (usually 1-2 months).

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Exclusivity

- Common for the only binding part of a term sheet to be a restriction that you don't talk with other investors for some period of time after you sign the term sheet.
- Reasonable because the VC is going to be paying lawyers to draft documents and perform due diligence on your company.
  - Be sure the time period is not too long – 30 to 45 days is plenty of time to finalize a VC investment in almost all cases.

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Types of early stage financing deals

Seed financing:

Convertible notes – structured initially as loans that are intended to become equity.

Series seed or Series AA – six-figure Angel or friends/family investments; generally not VC firms.

Series A – first significant round of VC financing.

Name refers to the class of preferred stock sold to investors in exchange for their investment.

Series B – second round of financing for a business through any type of investment including private equity investors and VC.

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Convertible notes

How does the debt become equity?

- Debt sits above equity in the "capital stack".
- Converts from debt to equity when certain events occur – usually upon a "qualified financing" (an equity financing of a certain size)

When should I use a convertible note?

- General advice - $500k or less, use convertible notes
- Consider future financing needs – if you'll need more money, do a stock deal or build in a conversion of the notes at maturity
- Delaying valuation – convertible notes allow you to treat smaller investment money fairly by delaying valuation

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Series A – Convertible Preferred Stock

- **What is convertible preferred stock?**
  - Convertible = includes an option for the holder to convert the preferred shares into a fixed number of common shares, usually any time after a predetermined date.
  - Preferred = Sits behind debt (even convertible debt), ahead of common stock on dividends, distributions, liquidation, and redemption.
  - Value of convertible preferred stock is ultimately based on common stock's performance.
- **When should I use convertible preferred stock?**
  - If you can negotiate a substantial valuation at the seed round.
  - If you don't mind the extra legal expense of this transaction over a convertible note round.
  - Caution – the investor will own a part of your company, and may want to exercise control via board seats, veto power, forced sale, etc.

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Shareholding

Pre-money valuation = the company's agreed-upon worth <u>before</u> new money is invested

Post-money valuation = pre-money valuation + the amount invested

Option = rights to buy shares of common stock in the future at a set price.

Pool = number of shares of common stock that you have reserved for options or other equity comp.

Restricted Stock Grant = an employer offers you shares of the company but places limitations on your ability to access or monetize the stock

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Profit and Loss

Marked Price Formula (MP)

This is basically labelled by shopkeepers to offer a discount to the customers in such a way that,

Discount = Marked Price – Selling Price

Discount Percentage = (Discount/Marked price) x 100

Profit formula and loss formula.

The profit or gain is equal to the selling price minus cost price.

Loss is equal to cost price minus selling price.

Profit or Gain = Selling price – Cost Price

Loss = Cost Price – Selling Price

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