Try to conceptualize the economics but not only memorize them.

Terms

Opportunity cost:
The society could have used these resources to produce something else, it sacrifices those other goods and services in making the lunch available. Economists call such sacrifices opportunity costs : To obtain more of one thing, society forgoes the opportunity of getting the next best thing. That sacrifice is the opportunity cost of the choice.

Marginal Analysis: Comparing
Benefits and Costs
To economists, “marginal” means “extra,” “additional,” or “a change in.” Most choices or decisions involve changes in the status quo, meaning the existing state of affairs.

Like the physical and life sciences, as well as other social
sciences, economics relies on the scientific method . That
procedure consists of several elements:
• Observing real-world behavior and outcomes.
• Based on those observations, formulating a possible
explanation of cause and effect (hypothesis).

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• Observing real-world behavior and outcomes.
• Based on those observations, formulating a possible explanation of cause and effect (hypothesis).
• Testing this explanation by comparing the outcomes of specific events to the outcome predicted by the hypothesis.
• Accepting, rejecting, and modifying the hypothesis, based on these comparisons.
• Continuing to test the hypothesis against the facts. If favorable results accumulate, the hypothesis evolves into a theory. A very well-tested and widely accepted theory is referred to as an economic law or an economic principle —a statement about economic behavior or the economy that enables prediction of the probable effects of certain actions. Combinations of such laws or principles are incorporated into models, which are simplified representations of how something works, such as a market or segment of the economy.

Laissez-faire

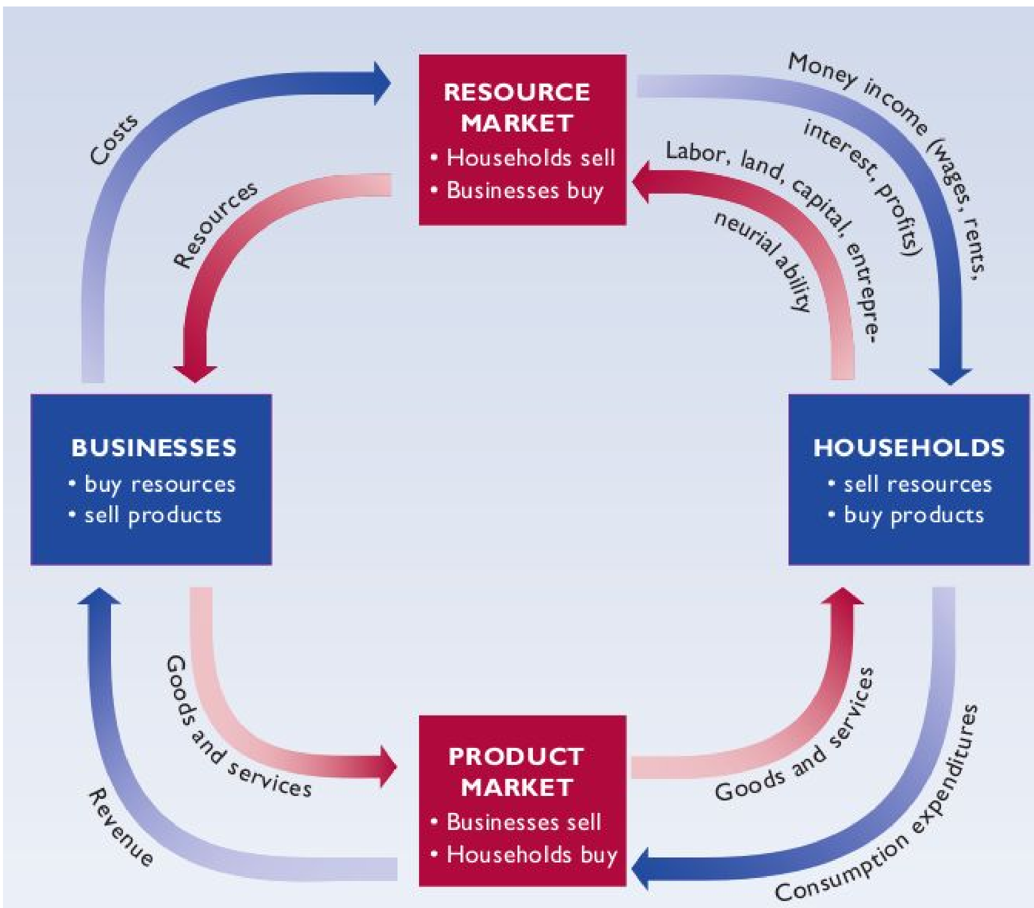
Key questions
What is microeconomics?
Microeconomics is the part of economics concerned with decision making by individual customers, workers, households, and business firms.

Adam Smith argued that self-interested actions of individuals actually guide market outcomes to yield great economic benefits for the broader society.

Oligopoly: Few sellers are in competition to each other.

The essence of economy is to acknowledge the reality of scarcity and then figure out how to organize the society in a way to maximize the efficiency of resources,

Allocating resources efficiently is complicated because there is a tradeoff between what is efficient from economic point of view and what is fair in social point .



Lecture 2

1. How can microeconomics help you at a business and professional level?
2. How can microeconomics help you at a personal level?
3. How is microeconomics distinguished from macroeconomics?

Microeconomics is the part of economics concerned with decision making by individual customers, workers, households, and business firms. At this level of analysis, we observe the details of their behavior under a figurative microscope.

Macroeconomics examines either the economy as a whole or its basic subdivisions or aggregates, such as the government, household, and business sectors, such as inflation, unemployment and the rate of economic growth. An aggregate is a collection of specific economic units treated as if they were one unit.

4. Regardless of whether a country has a command or mixed economy, what three basic questions must be answered?

What shall be produced?
How shall it be produced?
For whom shall it be produced for?
Resource scarcity.

5. Define and illustrate the production-possibility frontier.

The maximum of production that can be obtained by an economy given its technological knowledge and quantity of inputs or resources available.

6. Use PPF analysis to illustrate the concept of opportunity costs.

traveling along the curve.

7. Use PPF analysis to illustrate the concept of economic efficiency.

Points outside the curve are unattainable, while points insides the curve are inefficient. Points along the curve are efficient.

8. What are the three most important market failures?

Imperfect competition, monopolies.
Externalities, pollutions.
Public goods, national defense.

9. Summarize the various reasons why the government might intervene in the private marketplace.

Government rules and regularizations have as much or more to do with the bottom line profits of most companies than any competitor's' action.
Besides the market failure, there may be ethical or political reasons with how wealth and income are distributed.
Income distribution may not correspond to a fair outcome. Inequality of income and wealth
Progressive taxes
Business cycles (high inflation and unemployment). Slow economic growth.

10. What are the three major factors of production?

Lecture 3:

Supply and demand are inversely proportional in terms of price and quantity
Ceteris Paribus: other things constant.

Substitutions: chicken and beef, corn flakes and oatmeal, pens and pencils, oil and natural gas.

1. Why does quantity demanded tend to fall as price rises?

Substitution effect. When the price of one produce rises, the consumer choose an alternative product.

Income effect, when price increases, the purchasing power decreases accordingly.

2. Suppose the average income of consumers rises. What happens to the demand curve?

shift to more demands.

3. Suppose you are analyzing the market for beef and the price of chicken rises. What do you think will happen to the beef demand curve?
4. Explain the difference between a change in demand versus a change in the quantity demanded.

inversely proportional

5. The market demand curve is the horizontal sum of what?

The market demand curve is the horizontal sum of the individual demand curves.

6. Explain the Law of Supply.

The lower the price, the more units of products a consume would demand.

7. Name three shift factors influencing the supply curve.

Shift factors of demand curve: average income, population, price of related goods, tastes, special influences.

Shift factors of supply curve: technology, input price, price of related goods, government policy, and special influences.

8. Suppose your company comes up with a new cost-saving, computerized process for making corn flakes. What do you think will happen to the supply curve?

New tech, more supply

9. Suppose the price of labor or raw materials increases for corn flakes manufacturers. What happens to the supply curve?
10. Illustrate a shortage, a surplus, and equilibrium using supply and demand curves.

surplus is more supply than demand.

shortage is the short of supply than supply.

11. Illustrate a price floor for milk.

If market price fell below the floor, the government compensate the difference by buying any surplus.

12. Illustrate a price ceiling for wheat.

Use a ration card to allow the purchase. The government control for whom of the products.

13. Explain how the market mechanism answers these three questions: What goods are produced? For whom are goods produced? How are goods produced?

The market allocate and ration out the goods of the society among all possible uses.
Those who have the most dollar votes controls what goods are produced.
The power of the purse dictates the distribution of income and consumption.
The price influences how the goods are produced.

14. Provide several examples of how the supply and demand framework can help you save or make money in your professional or personal life.

Lecture 4

The theory of economics must begin with a correct theory of consumption.
A favorite economic trick: make a simplifying assumption to explain a complex point.
The greater the number of substitutes for a good, the more elastic its demand it will be.

1. Consumer choice boils down to what three things?

self interest: The pleasure people get from consuming a good;
The price they have to pay for it;
The income or budget available to them to exercise their choices

2. What is the difference between a cardinal and ordinal measure of utility?

Cardinal measure of utility use a quantitative measure of happiness
Ordinal measure ranks good relative to each other

3. What is the difference between total versus marginal utility?

Marginal utility is the additional utility derived from a one unit increase in consumption.
Total utility is the sum utility in consumption.

4. Explain the law of diminishing marginal utility.

Total utility increases with the consumption, but at a decreasing rate.

5. State the utility-maximizing rule or the equimarginal principle.

Consumers maximize the utility subject to a budget or income constraint.
A consume with a fixed income facing market prices will achieve maximum satisfaction when the marginal utility of the last dollar spent on each good is exactly the same as the marginal utility spent on any good.

6. When is utility maximized?

When the marginal utility of the last dollar spent on any good is the same.

7. What is the difference between real and nominal income?

Real income is the nominal income adjusted for inflation.
As prices of one good rises, quantity demanded falls.

8. What does the price elasticity of demand measure? Write out the formula.

The prices elasticity indicates how much consumer will increase or decrease their quantity demand in response to the price change.
E_D = (deltaQ/Q) / (deltaP/P)

9. Why do we use percentages rather than absolute amounts in measuring consumer responsiveness?

The unit of measure problem. Problem of comparing product at different price.

10. Define and illustrate elastic and inelastic demand.

Demand is elastic if given a given percentage change in price results in a larger percentage change in quantity demanded. gradual line >1
inelastic demand is a steep line <1
Unit elastic demand if price elasticity equals to 1.

11. What are the four major determinants of price elasticity of demand? Explain how each affects demand elasticity.

Substitutability, Product definition (how narrowly the product is defined), Proportion of income
Time

12. Suppose your business sells widgets and demand for your product is relatively price elastic. What would you do to raise your total revenues?

TR=P*Q, lower the price

13. Why do many airlines offer fare discounts to people who stay over on a Saturday night?

Separate the business people and tourists. Business people are inelastic and not willing to stay over. And vice versa.

14. Why don't most new cars sell at their sticker price?

Separate rich but busy people (impulse buyers), and people who have more time.

15. Why do many farmers go bankrupt when crops are plentiful?

Farming product is quite inelastic. Price drops but demand is almost stable, which yield lower revenue.

16. If the government imposes a sales tax on a product that is highly elastic, what will happen to total tax revenues?

Price rises and demand drops drastically. The revenue would decrease.

Lecture 5:

Competitive firm will produce at a level where the price of the product equals to their marginal cost.

1. Illustrate the production function algebraically and explain its components.

Q=F(K,L,R)
Q: The quantity of cars you want to produce
K: The capital or plant and equipment you need for production
L: quantity of Labor
R: raw material
F: the state of the current technology

2. What does the production function specify?

The product function is the maximum output that can be produced with a given quantity of inputs for a given state of engineering and technical knowledge.

3. Define the short run. Define the long run.

The period in which firms can adjust production only by changing **variable** factors such materials, and labor but cannot change **fixed factors** such as capital.
The long run is the period long enough that not only variable but also fixed factor such capital can be adjusted.

4. What is the difference between fixed versus variable costs? Provide several examples of each.

fixed cost referred to the cost that is stable regardless of output, while variable cost are the one depends on the output.

5. Explain the difference between the short and long run.

6. Define marginal cost.

MC is the difference of total cost divided by the output.

7. Explain the law of diminishing returns.

At certain point, the extra or marginal product of each additional worker must begin to decrease.

8. Define marginal product.

Marginal product of the input such as labor is the extra output added by one extra unit of input, holding other things such as capital constant.

9. Define and illustrate average fixed cost, variable cost and total cost.

AFC = FC/output
AVC = VC/output
ATC = TC/output
AVC curves approaches to ATC curve as the output increases.
The firm searching for the lowest average cost of product should look for the level of the output at which marginal cost equals to the variable cost.
When marginal cost is coupled with the concept of marginal revenue the firm is able to determine if it is profitable to expand or contract its production.

10. The long run average cost curve is the envelope of what? Illustrate this.

The long run average cost curve is the envelope of the short run average cost curves.

11. Explain the difference between economies of scale, diseconomies of scale and constant returns to scale. Illustrate each with the appropriate cost curve.

Economies of scale:
Exist when the per-unit output cost of all inputs decreases as output increases.

1. labor specification

2. Managerial specialization
3. Efficient capital use
4. By-product

Diseconomies of scale:
Managerial problems efficiently controlling and coordinating the firm's operation as it becomes a large scale producer.
In massive production facilities, workers may alienate from their jobs and efficiency may suffer.
All U-shape curve
Narrow and steep U-shaped curve indicates economies of scale exhausted quickly: small retailers, shoes and clothes industry
Constant returns to scale: banks, small appliances, food processing, furniture, wood product
unit cost steady falls, and leading to **increasing return** to scale over the relevant output: natural monopoly: railroad and cable tv
The market failure result: Price is set too high and output too low.

12. Economies of scale may be traced to what factors?

13. An industry characterized by increasing returns to scale is called what?

Monopolies

14. Define minimum efficient scale.

The smallest level of output at which a firm can minimize long-run average cost.

15. Define both the law of supply and the price elasticity of supply.

When the price of a good increases, the quantity of that good supplied will increase.
E_S = (delta Q/Q)/ (delta P/P)

16. What is the difference between economic versus accounting profits? Explain why this difference is important.

Explicit costs are your monetary payments to "outsiders" for things like labor, materials, fuel, transportation, and power.
Implicit costs represent the money payment you could have earned by employing your own resources in their best alternative use.
Consider the opportunity cost

Lecture 6

The market demand curve is the horizontal sum of the individual demand curves.

1. To what does industry structure refer? What are the major types of industry structures?

How many firms are in an industry
Whether the firms are big or small
What the firms' cost structure looks like
How market share is divided among the firms.

Perfect competition
Imperfect competition: monopoly, monopolistic competition, oligopoly

2. What is the central concept driving the structure-conduct-performance paradigm?

Industry structure -> Market conduct -> Market performance

3. Identify several types of market conduct.

Market conduct embodies the various pricing and marketing tactics and strategies of businesses.
It includes at what level a firm or industry sets its price and output.
It also includes whether that firm or industry engages in various kinds of non-price competition through product differentiation and advertising.

4. How is market performance measured?

Market performance is measured by yardsticks such as allocative efficiency and product efficiency.

5. What is the most important requirement of perfect competition?

where numerous buyers and sellers meet, consumers pay the lowest price for the most goods, and all resources are allocated efficiently. Perfect competition is the most efficient type of market structure.

6. Illustrate the price taker concept.

There are numerous buyers and sellers. Therefore, one firm’s output is trivial to the market output.

7. Define marginal revenue.

it is the additional revenue earned by the firm from the sale of one additional unit.

8. What is the relationship between the industry market price and the firm's marginal revenue in a perfectly competitive industry?

P=MR under the price taker assumption and a perfectly elastic demand curve.

9. Define a homogenous product.

A homogeneous product is a product such that each firm’s output is indistinguishable from any other firm’s output.
Differentiated products means the same products of different brands.

10. What does free entry and exit mean? Why is this assumption important?

Additional firms may freely enter an industry when prices and profits rise and just as easily exit the industry in the presence of losses.

11. What does perfect or complete information mean? What does this assumption ensure?

Both consumers and producers will be fully informed about the market prices and price changes.
This ensures the consume to pay the lowest price available because they will always know what the price is

12. Explain the externalities problem.

Externalities includes pollution and congestion, and the government is likely to intervene.

13. Explain the public goods problem.

Public goods include national defence and and roads and bridges.

14. Why is the market failure concept so important?

When one of the assumptions fail, there is a market failure.
The concept of market failure is the theoretical foundation upon which much of the economic rationale for our modern government rests.

15. Given a market structure of perfect competition, what kind of conduct with respect to pricing can we expect? What is the profit-maximizing rule?

P=MR=MC
The price maximizing, perfectly competitive firm is a price taker in the market place.
MR=MC is the profit-maximizing rule.

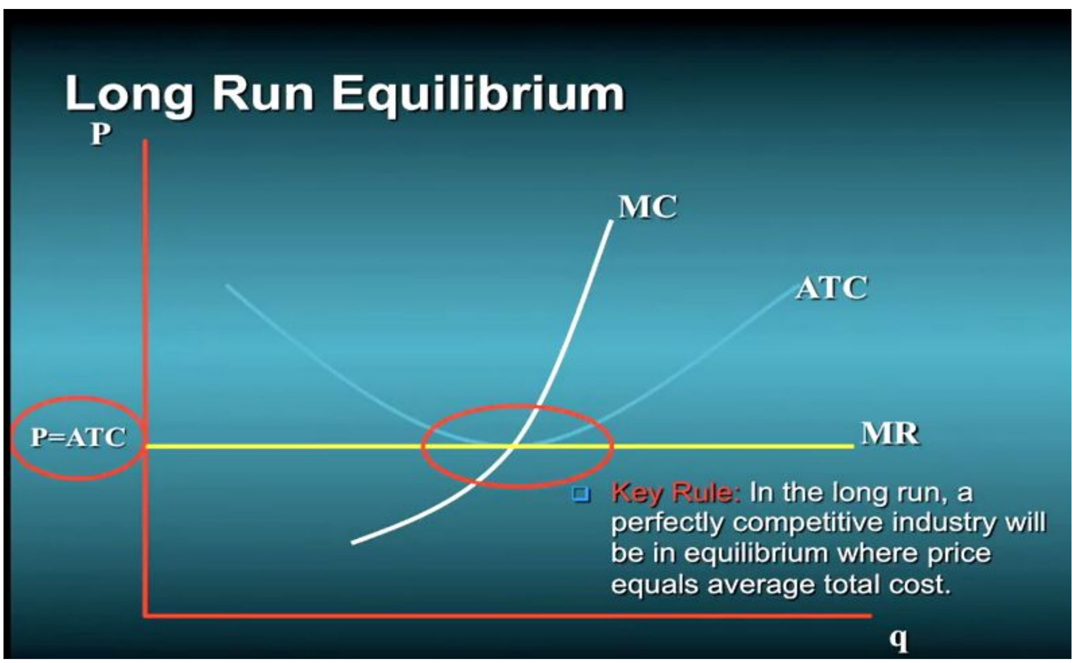
16. If the profit-maximizing firm always sets its output at a level where marginal cost equals marginal revenue, then what must be true about the firm's supply curve?

It must be true that its marginal cost curve must be the firm's supply curve.

17. Explain the shutdown condition or shutdown rule.

The shutdown point comes where revenues just cover variable costs or where losses are equal to fixed costs.
When the prices falls below the level where revenues are equal to variable costs, the firm will minimize its losses by shutting down. The firm must still cover its contractual commitments even if it produces nothing.

18. Illustrate long run equilibrium for the competitive firm. What does price equal and how much economic profits does it earn?



In the long run, a perfectly competitive industry will be in equilibrium where price equals to average total cost, and earn zero economic profits.
At this point, firms will earn normal profits or zero economic profits.

19. What is the difference between accounting and economic profits?

Accounting profits are the subtraction of total cost from total revenue.
The leftover after taxes is distributed as dividends or or kept by the firm as retained earnings.
Economic profits is the difference between the earnings from your current job and the earning by employing your own resources in their best alternative use.

20. What is the relationship between price and average total cost in the long run equilibrium?

price = average total cost

21. What is the difference between allocative and productive efficiency?

Productive efficiency occurs when price equals to the minimum average total cost.
The firm is using best available. least cost technology.
Allocative efficiency is on Production Possibility Frontier.
Allocative efficiency is not only that the right mix of good be produced but also these goods be allocated among consumers to maximize customer satisfaction.

22. Explain Pareto Optimality.

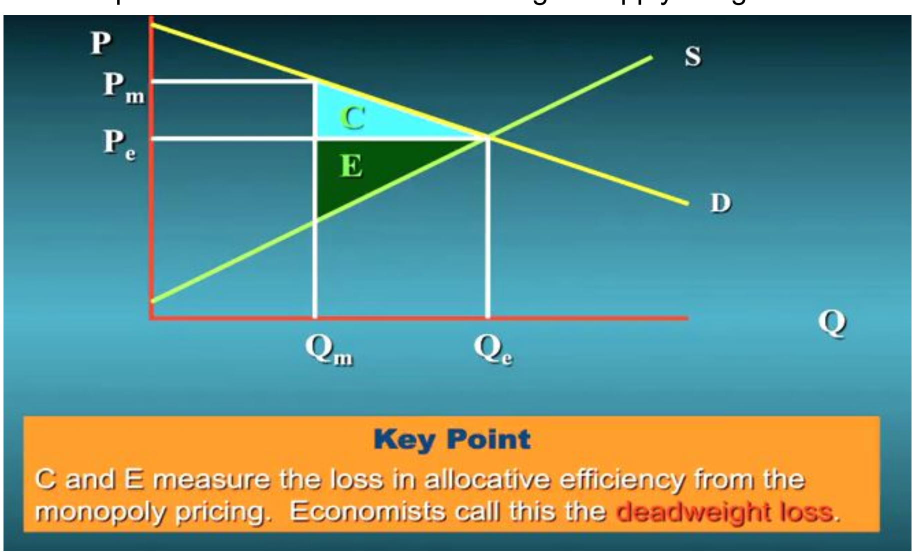
An allocation of resources is Pareto Optimal when no possible reorganization of production can make anyone better off without making someone worse off.

23. Illustrate consumer and producer surplus and the dead weight loss.

In a perfectly competitive market, equilibrium occurs when supply intersects demand so that social benefits equals to social cost.
Also Marginal Cost = Marginal Benefit = Marginal Utility

Consumer surplus is the triangle below the demand curve. It provides a dollar measure of the difference between what consumer would have been willing pay and what they actually pay.

Producer surplus is the triangle above the supply curve. It provides the price difference between at which producer would have been willing to supply the goods and what they actually receive.



24. A perfectly competitive market yields the most efficient use and allocation of resources, as embodied in productive and allocative efficiency. Yet still, there are several problems. Describe two.

Perfect competition is rare in the real world, as too many assumptions to be met.
The equity problem: though the result is efficient, they are not necessarily fair. The efficient allocation of resources achieved by perfect competition is contingent on the initial distribution of income.

25. What is the difference between positive versus normative analysis?

The normative or prescriptive analysis is asking about what should be.
The positive or descriptive analysis for economist is describing what is rather than what should be.
Positive economics can offer great insights about how different types of government policies can affect the distribution of income and consumption.

Lecture 7:
Competition is "when everyone tries to get a monopoly".
Price is generally higher and outputs are generally lower under imperfect competition than under perfect competition.
Benefits of imperfect competition:
Exploitation of economies of scales to lower costs, acceleration of technological change to promote long term growth.
Imperfect competition helps us understand how the economies of industrialized nations function.

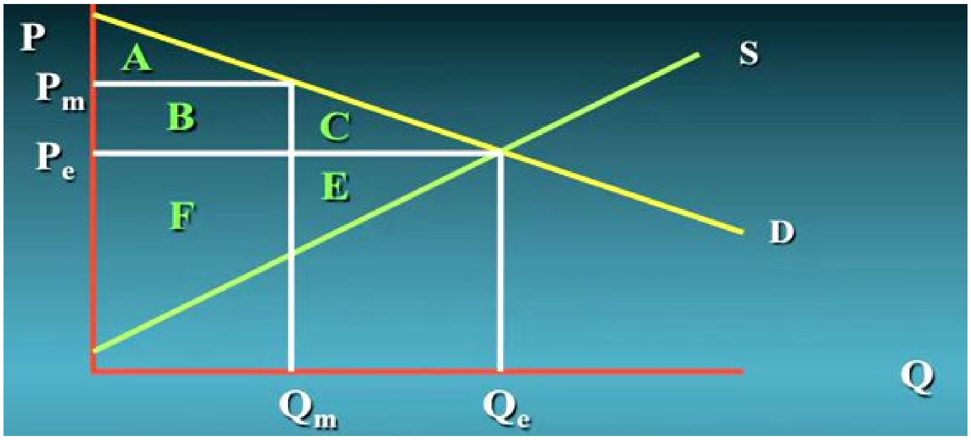
1. What is a cartel? Are cartels legal in the United States?

Shareholders turn their shares over to trustees who would then manage the industry and to maximize their profit, which is called cartels
A cartel is an organization of independent firms producing similar products that work together to raise prices and restrict output.
Antitrust laws

2. When does a monopoly exist? What is the pricing rule for a monopoly?

It exists when there is one seller in the market selling a product for which there are no close substitutes.
It is the price maker.
the pricing rule is MR=MC

3. Illustrate the dead weight loss of a monopoly.



4. What is characterized by a natural monopoly?

Increasing return to scale over the relevant range of output, one firm will emerge as the low-cost producer, which is the natural monopoly

5. Why is breaking up a natural monopoly a bad idea?

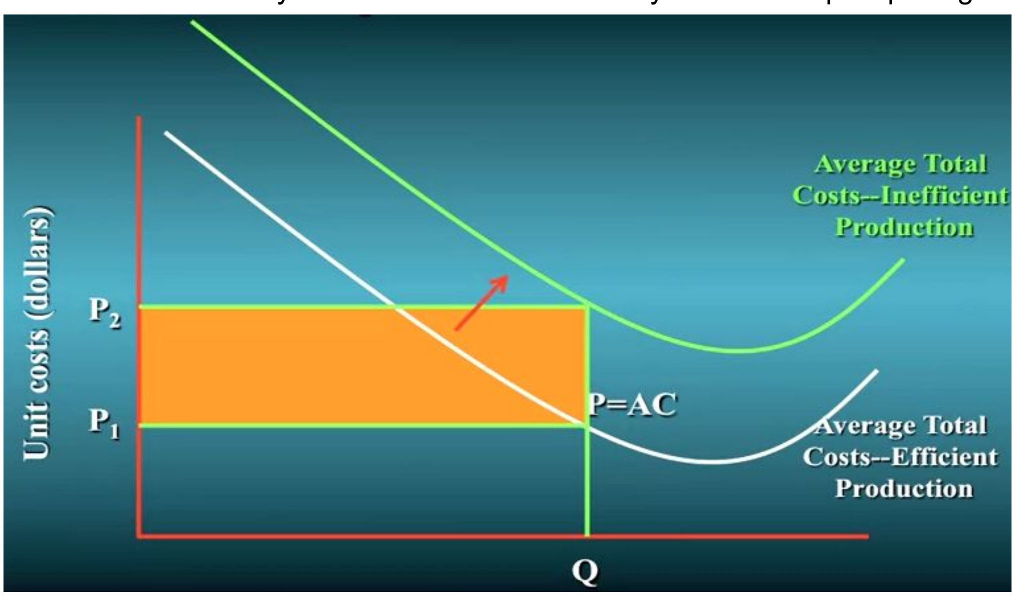
Breaking a natural monopoly is a bad idea, because each small firms will produce at a significantly higher unit cost than a natural monopoly.
Cannot achieve the minimum efficient scale as the monopolist.

6. When the government regulates monopolies, where is price usually set?

P=AC

7. Illustrate X-inefficiency. Why is this concept important?

Under cost-plus pricing, regulated industries no longer have the incentive to lower the costs and therefore maximize the profits.
In some cases, any increase in allocative efficiency achieved by regulating a monopolist might be more than offset by an increase in X-inefficiency due to cost-plus pricing.



Executives in the regularized industries tend to hire more stuff, buy thicker carpets, build larger offices, and engage in more business travel than they otherwise would under stick price maximizing.

8. What does dynamic efficiency measure? What is the implication of dynamic efficiency for monopolies?

Dynamic efficiency measures the rate of technological change and innovation in economy.
Since they have more capital to engage in long term strategies such as R&D, and more fund to invest to speed the diffusion of technology.

9. What are the defining characteristics of monopolistic competition?

A relatively large number of sellers; easy entry and exit from the industry; product differentiation.

10. Explain the three key differences between oligopoly and monopolistic competition.

Size of market share: A monopolistic economy is relatively unconcentrated, but oligopolies are price makers.
Collusion: in oligopoly, collusion is possible, on the contrary, in monopolistic competition, collusion is all but impossible.
Independence action: there is no feeling of mutual independence with numerous firms.

11. Define the four-firm concentration ratio. Why are concentration ratios so important in studying market structure?

The four-firm concentration ratio is defined as the percent of total industry output accounted for by the four largest firms.
It is important because it serves as an indicator of strategic interaction.

Chewing Gum		96%
Household laundry equipment		93
Cigarettes		92
Electric lamps (bulbs)		91
Motor vehicles		90
Small arms ammunition	Oligopoly	88
Primary copper		87
Breakfast cereals		87
Beer and malt beverages		87
Household refrigerators		85
Greeting card publishing		85
Book publishing		24%
Upholstered furniture		24
Wood furniture		20
Metal house furniture		18
Paperboard boxes		16
Bolts, nuts, and rivets	Monopolistic Competition	16
Fur goods		16
Women's and misses' suits and coats		13
Metal doors		13
Women's and misses' dresses		6

12. Discuss the concepts of strategic interaction and mutual interdependence.

It describes how each firm's business strategy depends on their rivals' strategies.
As the number of firms in an industry shrinks and industry concentration grows, each firm is more likely to base pricing and output decisions on how other firms in the industry are likely to respond.

Each firm is more likely to want to collude with the others when setting price and quantity.
Collusion: The concerted action by firms to restrict output and fix price.

13. What can we say about the difference between monopolistic competition and perfect competition?

Price competition: Purely competitive firms produce homogeneous products.

14. Discuss the relationship between product differentiation and nonprice competition.

Monopolistically competitive producers turn out many variations of a particular product. Therefore, economic rivalry typically takes the form of non-price competition.

15. Identify four sources of product differentiation.

Product quality, condition of sales and service, location, packaging and advertising.

16. From the economist's point of view, product differentiation in general and advertising in particular have what two goals?

Increase the consumer demand of their good, and thereby increase the firm's market share.
Secondly, they want to increase the inelasticity of their products.
Increased inelasticity increases the strategic opportunities of the firm.

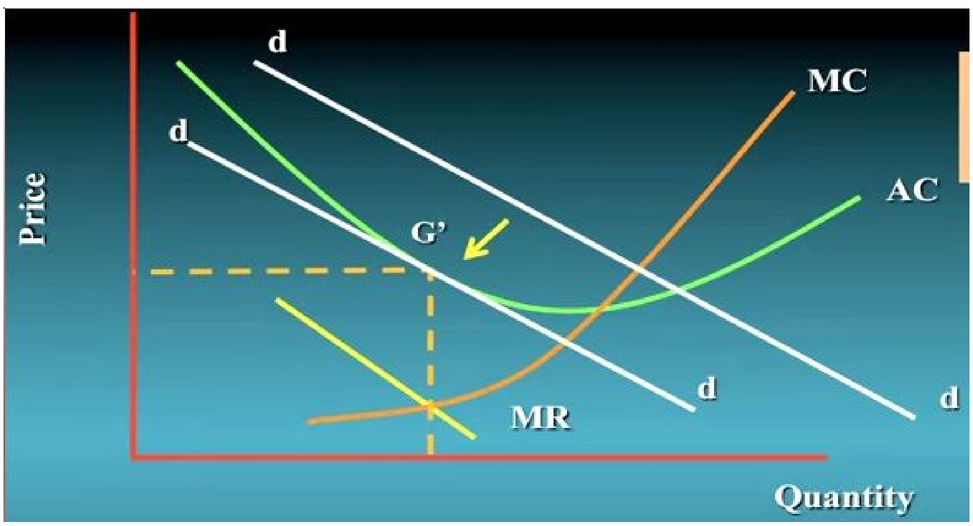
17. For what two reasons is monopolistic competition sometimes called noncollusive oligopoly?

There is a large number of firms in the industry so collusion is difficult.
New firm may enter the market by taking advantage of any collusive monopoly pricing.

18. What will profits be for monopolistic competition in the short and long run?

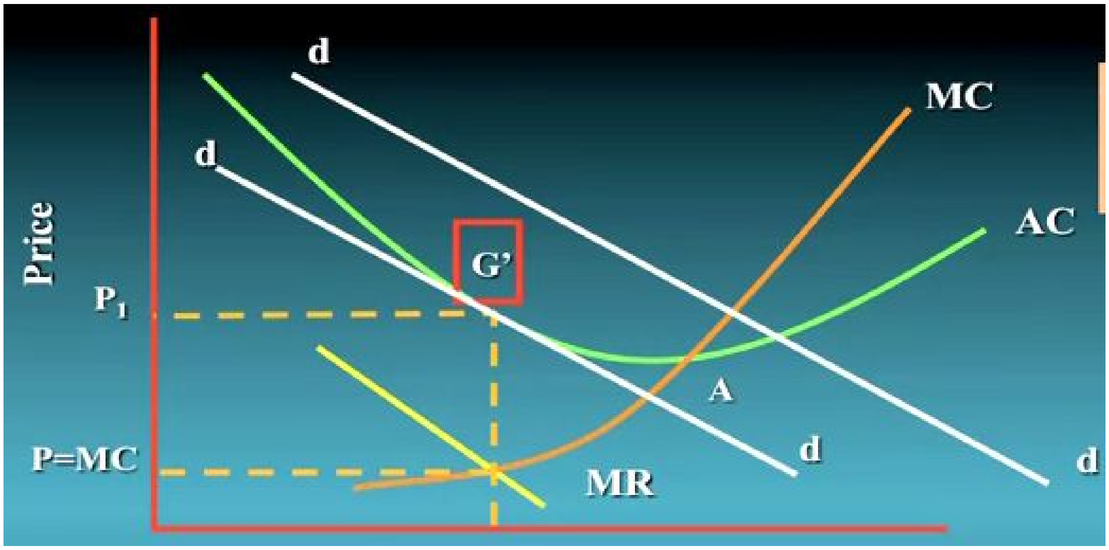
In the short run, monopolistic competitors may well earn monopoly profits under circumstances.
In long run equilibrium, economic profits in the industry will be driven to zero - same as in perfect competition.
Under monopolistic competition, price will be above marginal cost, indicating a deadweight efficiency loss. P > MC

19. Illustrate the short and long run implications of monopolistic competition for market performance.



More firms will enter the market lured by the large economic profits, and will cease when being forced into a long-run, non-profit tangency such as G'.

In the long run, monopolistic competition is neither allocatively and productively efficient. An underallocation of resources occurs in the industry because the produce price exceeds marginal cost.



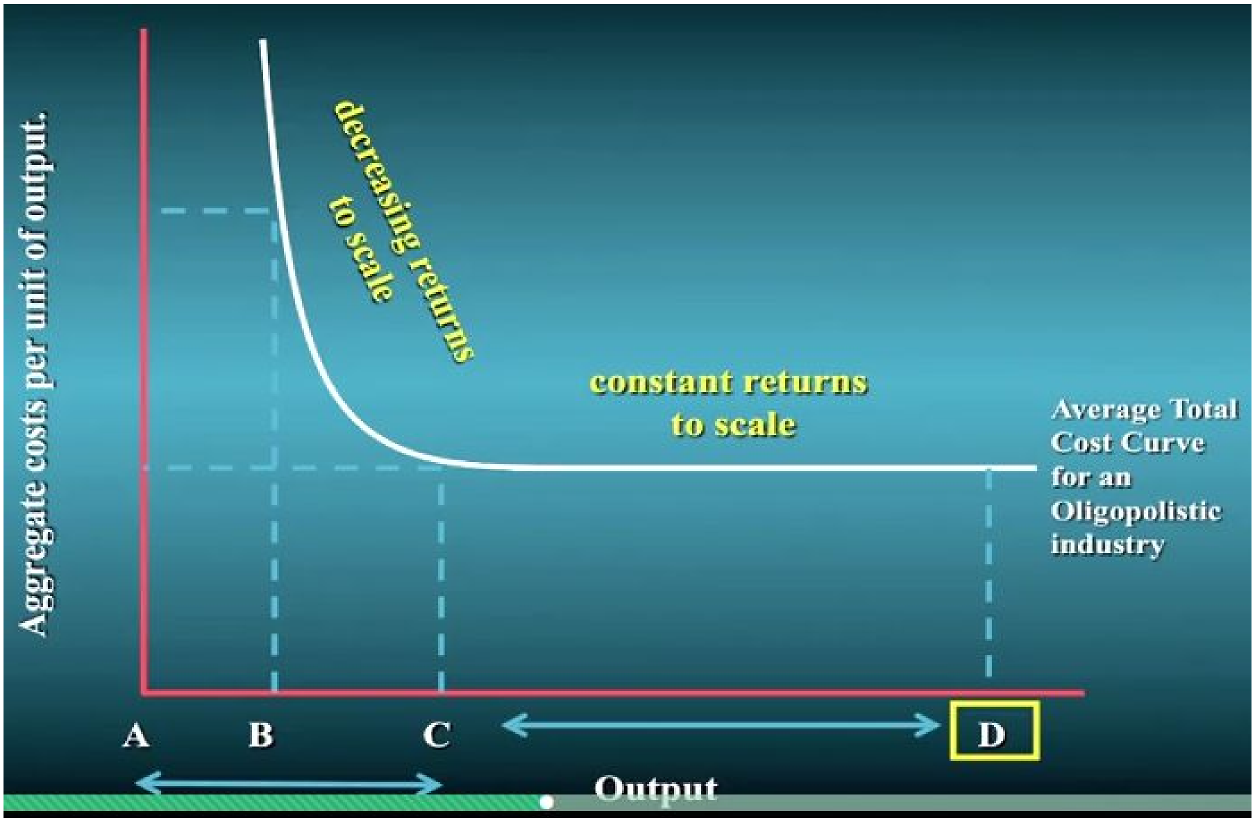
20. Some economists argue that monopolistic competition leads to both excessive advertising and needless brand proliferation. Why?

Because firms will Increase demand and demand inelasticity.
Increased profit: Advertising increases demand and demand inelasticity so that a firm can improve its profit position.
Diversity can be good: Reducing the number of monopolistic competitors, while cutting costs, might well end up lowering consumer welfare.

Lecture 8:
Market share is the percentage of market output produced by a firm.
Market power signifies the degree of control that a firm or a small number of firms has over the price and production decisions in an industry.

1. Define oligopoly. Illustrate scale-economy barriers to entry.

Oligopoly exists when small number of typically large firms dominate the economy. The central element of oligopoly is strategic interaction.Have a better chance of collusion.



2. Explain the entry dilemma in oligopolistic industries.

Easily forced out: If a firm with output at the level of AB tries to enter the market, it incurs too much costs which will be driven out of the market.
Entry deterred: Even a firm with a plant size of MES, it will have to seize a sizeable market share to achieve efficient production.
Large capital requirements: require a large amount of capital investment to set up the elaborated plant and equipment necessary to produce.
Absolute Cost Advantage: Trade secret. patent. raw material
Product differentiation: brand, advertising cost

3. What kinds of industries are characterized by large capital requirements barriers to entry?

cigarettes, autos, steels and petroleum refining.

4. Identify three sources of absolute-cost barriers to entry.

Absolute Cost Advantage: Trade secret. patent. raw material

5. How can product differentiation be a barrier to entry?

Product differentiation: brand, advertising cost

6. Why are concentration ratios so important in the study of oligopoly?

It serves as an indicator of the degree of strategic interaction that might occur in an industry.

7. Distinguish between cooperative versus non-cooperative behavior.

Firms operate in a cooperative mode when they tri to minimize competition by agreeing explicitly and tacitly on price and output and other market issues. -- Some form of collusion.
Non-cooperative behavior is similar to monopolistic competition.

8. What is the difference between explicit versus tacit collusion? Which one is illegal in the United States?

Explicit collusion forms trusts or cartels to set prices. -- illegal.
Tacit collusion occurs when firms in an industry refrain from competition without explicit agreements.

9. What are some ways that executives tacitly collude?

Public speeches, trade associations or tacit collusion.

10. Describe the Cartel Model and explain the pricing rule.

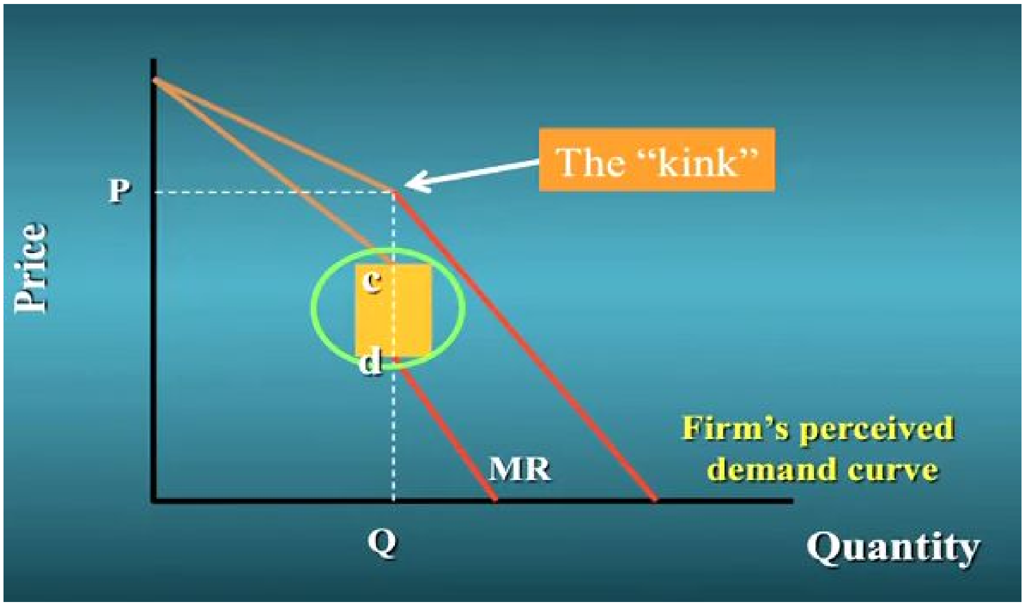
The Cartel model provides insight into the price and quantity that oligopolists are likely to set when they can successfully collude.
If oligopolist can coordinates their activities, the obvious price to set is the same as that which would be set by a monopolist. MC=MR
If price is set at that point, the oligopolists will jointly maximize their profits, which is why this model is called the joint profit maximization model.
However, the total industry output might equal to the monopoly output. If one firm product more output, they make more profits.
OPEC

11. Explain and provide examples of the Price Leadership model.

It provides insight into how firms in an industry might tacitly collude as well as how firms in that industry which refuse to collude might be punished for failing to follow the leader.
The dominant firm initiates a price change and all other firms more or less automatically follow the price change. It may punish the non-cooperative firms by significantly lower the prices for a while, forcing the followers to incur losses. -- price discipline.
e.g. Cigarette industry

12. Illustrate the Kinked Demand Curve model.

It offers an explanation other collusion as to why prices in an oligopoly might be set higher than the perfectly competitive outcome. This model helps to explain why prices are sticky in oligopolistic industries, that is why prices do not rapidly adjust to changes in supply and demand.



Demand is inelastic because when one company lower its price, and so will the others. The firm's perceived demand has a kink in it, which is cd.Therefore, the relatively large shifts in marginal costs between cd, will not change the price or the output since they do not change the intersection of marginal cost and marginal revenue.

Price will be "sticky"
If set high, prices will remain high even in the absence of collusion.

13. What is the guiding philosophy of game theory?

We can capture the full diversity as well as the ambiguity of strategic behavior in oligopolistic situations.
You will pick your strategy by asking what makes most sense assuming that rival is analyzing your strategy and acting in his or her own best interest.

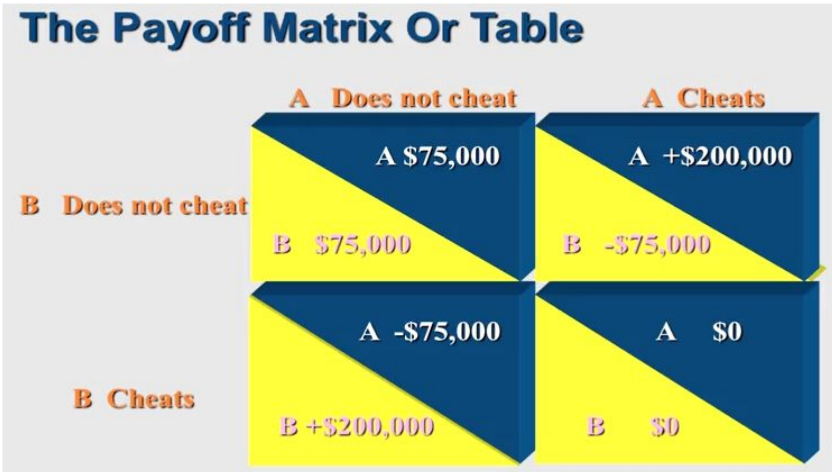
With mutual independence recognized, oligopoly conduct becomes a game of strategy such as poker, chess or bridge.
Game theory also sheds light on the importance of collusion in driving socially undesirable economic outcomes.It helps to underscore why such collusion is often made illegal in a given economic system.

14. What does the Prisoner's Dilemma game demonstrate? Explain how it works.

It demonstrates the difficulty of cooperative behavior in certain circumstances.
The only way out of Prisoner's dilemma is trust. And it is hard to come by unless there is an explicit enforcement mechanism.

15. Apply the Prisoner's Dilemma to the case of duopoly.

It provides insights into the strategic situation that game theory was developed by analyzing the strategies of both firms under all circumstances and placing the combinations in a payoff matrix or payoff table.



16. What is a Nash Equilibrium? Why is this concept important?

It describes a situation in which no player can improve his or her payoff given the other player's strategy. It describes a non-cooperative equilibrium. In the absence of collusion, each party chooses that strategy which is best for itself.

Lecture 9

GDP = gross domestic production

GDP = Wages + Rents + Interests + Profits

One way of measuring the GDP is to add up all the income that people receive each year from producing the year's output using the three major factor of production: land, labor and capital. Your income depends on the wages you earn at your job, the interest and profits derived from any stocks, bonds or other capital that you hold and the rents from any land that you might own.

Property rights: are the rights given to people to use specific property as they see fit, and in modern society, such rights are protected by a complex set of laws.

1. Name the three major factors of production.

land, labor and capital

Price of land: the rent that the firm must pay for.

Price of labor: the wage rate

Price of capital: Related to both the interest rate and the profits earned on capital.

2. Discuss four reasons to study factor pricing.

Factor price is why the price of an item tends to approach the cost of producing it.

(The distribution of income in a country is determined in large part by the price for which each of the major factors of production can be sold or rented.)

Factor pricing determines your annual income.

From a broader economic view, factor pricing also guides resource allocations.

Resource prices allocate scarce resources among industries and firms.

Factor pricing illustrates cost minimization: to maximize profit, your firm must produce the profit-maximizing output with the least costly combination of factor resources.
Ethical questions and policy issues: redistribute the income by the government: excess profits and minimum wage.

3. Which of the three major factors of production has the largest share and which has the smallest?

land, labor and capital

4. What makes land different from most other factors of production?

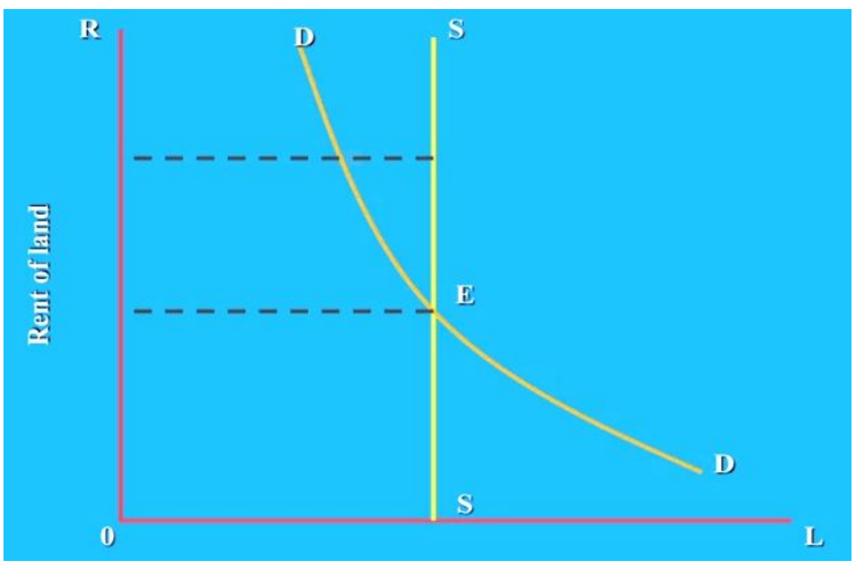
Land is good investment: they are not making it no more. --- Will Rogers
The essential feature of land is that its quantity is fixed and completely unresponsive to price.
Its fixed nature of supply of land that makes it different from other factors.

5. Define pure economic rent.

The price paid for the use of land and other natural resources which are completely fixed in supply.

6. Illustrate how rent is determined in the market.

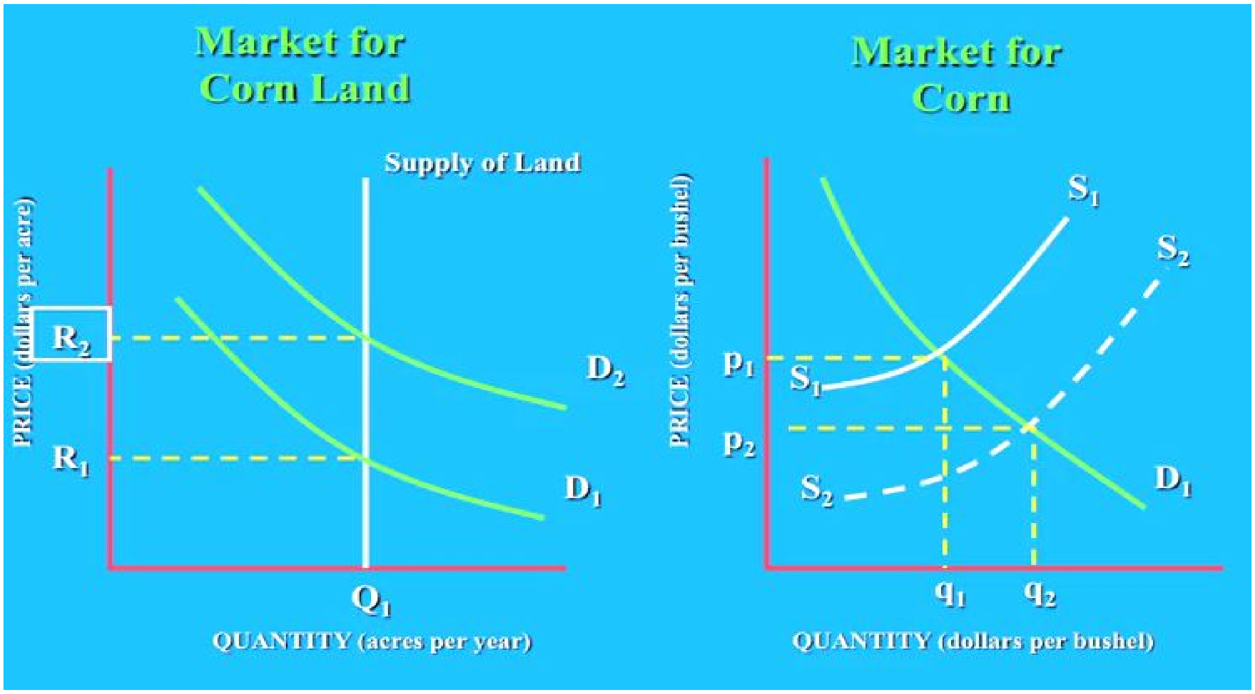
It includes the compensation of:
The use of capital such as the building structure
Labor, including building maintenance and management.
The use of utility services such as water, electricity and gas.
Only a fraction of the payment represents the pure economic rent



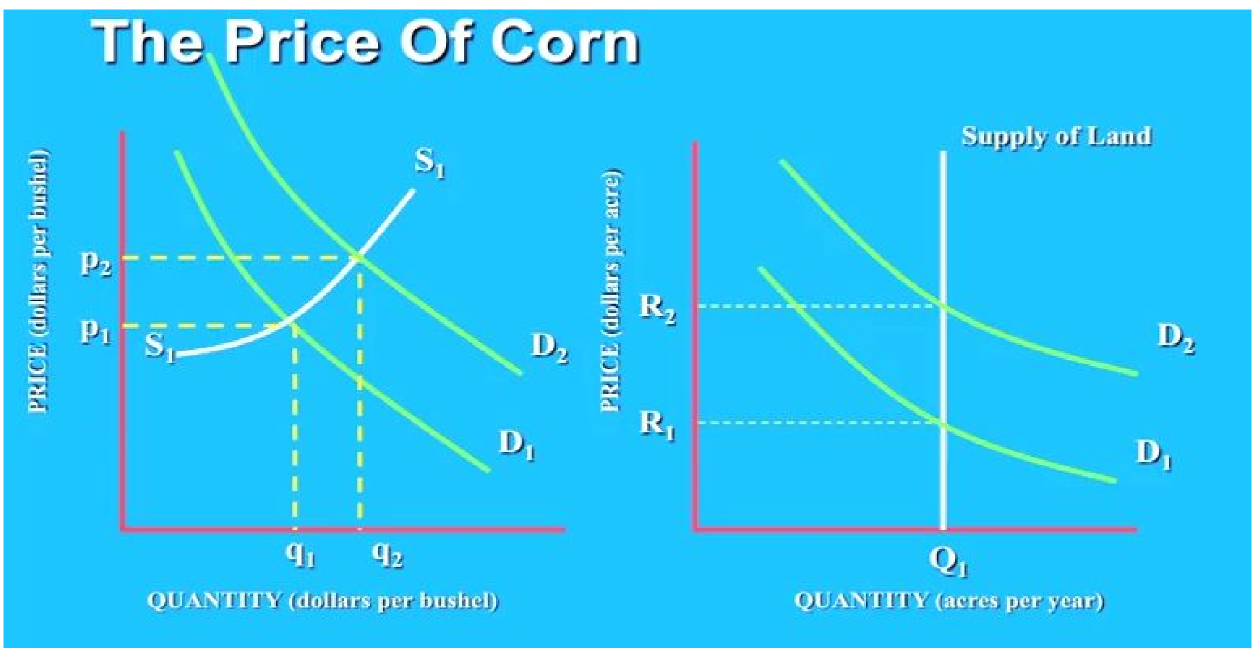
7. Illustrate the Corn War debate. What was David Ricardo's explanation for rapidly rising grain prices?

Landlord raise the price of land, and thereby forcing the farmers to pass onto the increase in land costs to consumers.

The price of corn is not high because a rent is paid. Rather rent is high because the price of corn is high.



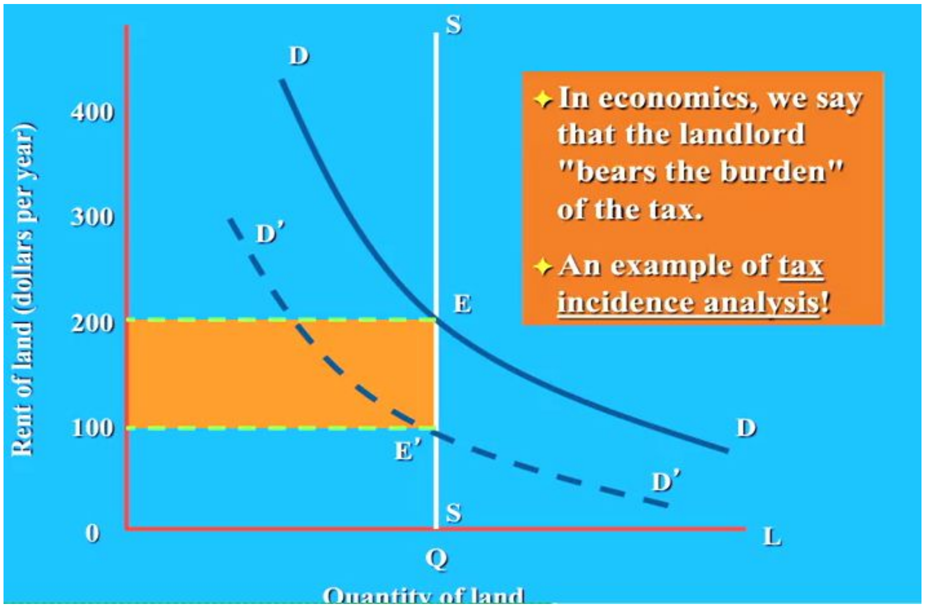
Supply decisions are based on marginal cost, not fixed costs, such as the cost of land.



8. Explain why Henry George advocated a single tax on land.

Since all land rents are unearned incomes, land should be nationalized. Use the single tax on land to cut or eliminate all other taxes on capital, labor and improvements on the land. It proved that such a tax could improve the distribution of income without harming the productivity of the economy.

9. Prove that a tax on pure economic rent will result in no distortions or allocative inefficiencies.



A tax on pure economic rent does not change anyone's behavior.
Consumer are unaffected by the tax because price has not changed. And the behavior of landlords is unchanged because the supply of land is fixed and therefore cannot react.

10. What is tax incidence analysis?

The landlord bears the burden of the tax.

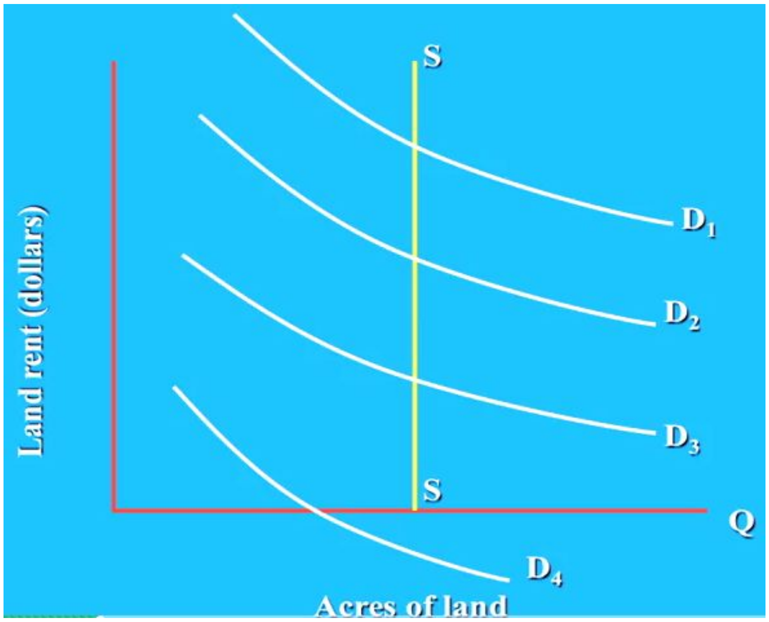
11. What are the major criticisms of Georgist Theory?

The current levels of government spendings are such that a land tax alone would not bring in enough revenues.
Land is typically improved in some manner by productive effort, and economic rent cannot be readily disentangle from payments for capital improvements.
A piece of land is likely to have changed ownership many times.

12. Why does an acre of farmland in Iowa cost so much more than an acre of farmland in New Mexico?

All land are not created equally: there is a productivity difference. The productivity differences will be reflected in resource demand.
Location: Other things equal, business renters will pay more for a unit of land which is strategically located with respect to materials, labor, and customer than for a unit of land that is remote from the markets.

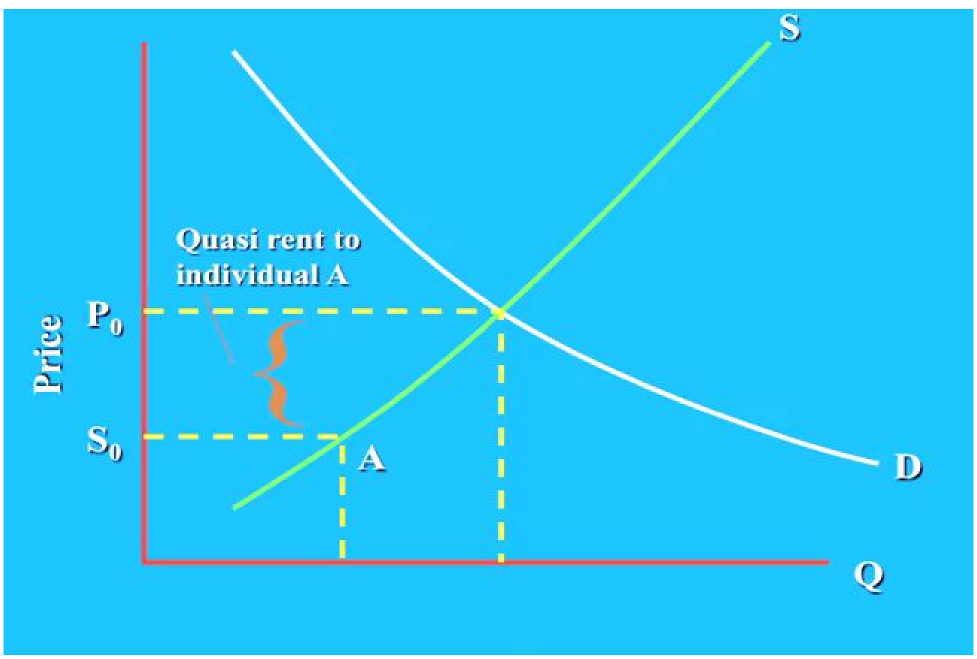
13. Illustrate the rent differentials that might arise from differences in the quality of land and its productivity.



14. Illustrate the concept of quasi-rents.

Rent allocates land resources. The market determines the land use.

Quasi-rents: The concept of rents is extended to include any payment to a factor resource above its opportunity cost -- that is, above the amount it would receive in its next-best use.



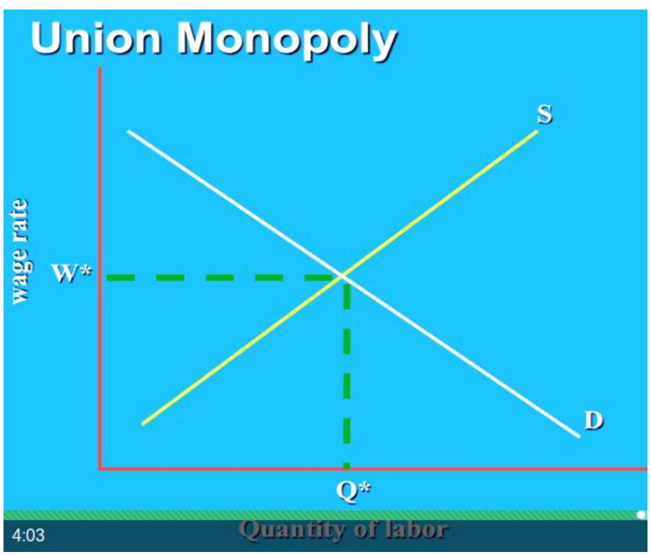
The demand for these performers is very high because they can generate substantial revenues for their musical, comedic, and athletic talents. e.g. MJ plays baseball.

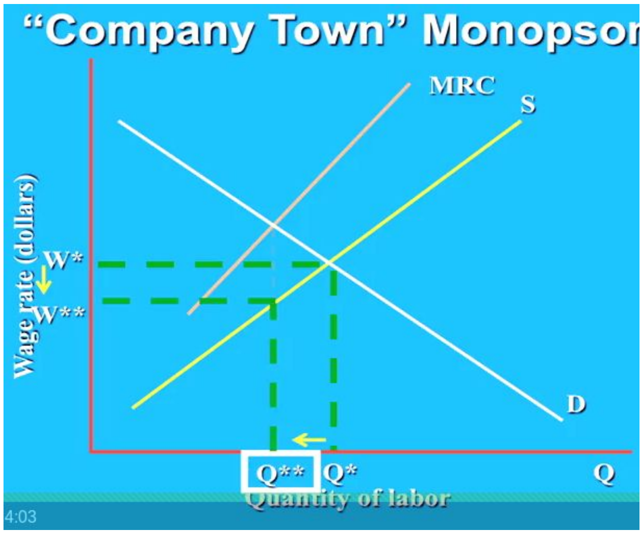
15. What is rent seeking? Provide an example from public policy.

Rent seeking is the name given to the restricting of supply in order to increase the price suppliers receive. It is an attempt to create either ownership rights or institutional structures that favor you.
Chairman of GM and receive competition from Japanese Toyota. Become an efficient producer.
Political solution: Impose a quota/tariff on Japanese producers.

Lecture 10:
Factors influence the worker's productivity and marginal productivity wage and thereby change their wage:
The amount of capital and natural resources, the state of the technology, the quality of the labor itself.
Factors determines the labor supply:
Labor force participation, hours worked, rate of immigration
The lower price that accompanies every increase in output applies in each case not only to the marginal product of each successive worker but also to all prior units which otherwise would be sold at a higher price.
The lower price that accompanies every increase in output applies in each case not only to the marginal product of each successive worker but also to all prior units which otherwise would be sold at a higher price.
Imperfect competition is less elastic than perfect competition. The imperfectly competitive producer will also employ fewer workers, and more broadly, fewer factor of production.

1. Explain why the demand for labor and other factors of production is a derived demand.





Households want to consume the food and fiber products these resources help produce. The demand for automobiles creates a demand for auto makers. The demands for such services as income tax preparation, haircuts, and child-care create derived demands for accountants, barbers, and child-care workers.

2. The derived nature of resource demand implies that the strength of the demand for a factor such as labor will depend on what two things?

The productivity of the factor helping to create the product
The market price of the product that the factor is helping to produce.

3. As the units of labor increase, the total product increases but the marginal product of labor decreases. What law is responsible for this?

The law of diminishing return.

4. What is the marginal revenue product?

MRP is the increase in total revenue resulting from the use of each additional variable input, in this case, labor.

5. State the Marginal Productivity Theory of resource demand.

To maximize profits, the firm should hire additional units of a given resource -- labor, land, and capital -- so long as each successive unit adds more to the firm's total revenues than it does to total costs.

6. Define marginal resource cost.

The amount each additional unit of a factor resource adds to the firm's total resource cost.

7. State the rule for employing factor resources.

The profit maximizing rule:
It will be profitable for a firm to hire additional units of a factor resource such that a labor up to the point at which that resource's MRP is equal to its MRC.

8. What is the MRC equal to under the assumption that the labor market is perfectly competitive?

MRC = wage rate

9. State the complete rule for profit maximization under perfect competition.

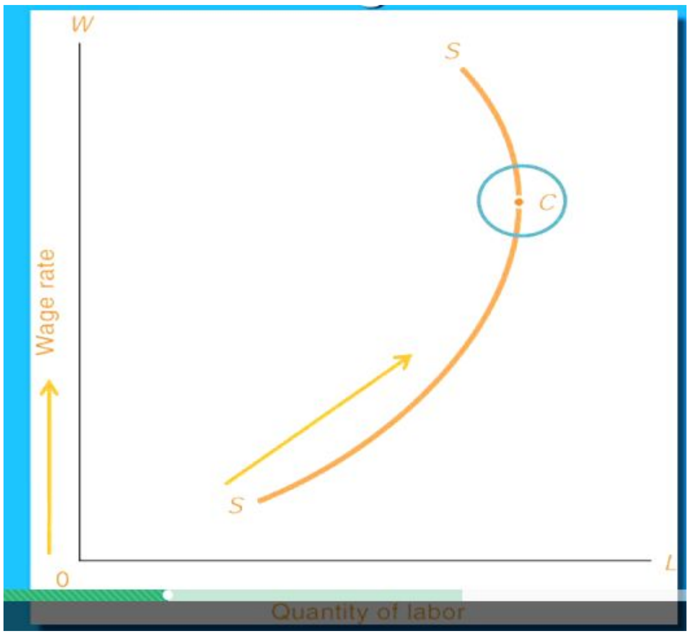
MRC = MRP = WR

10. Why does the MRP schedule constitute the firm's demand for labor?

MRP > MRC, hire more workers

MRP < MRC, fire more workers.

11. Illustrate the backward-bending curve.



<- Quantity of workers

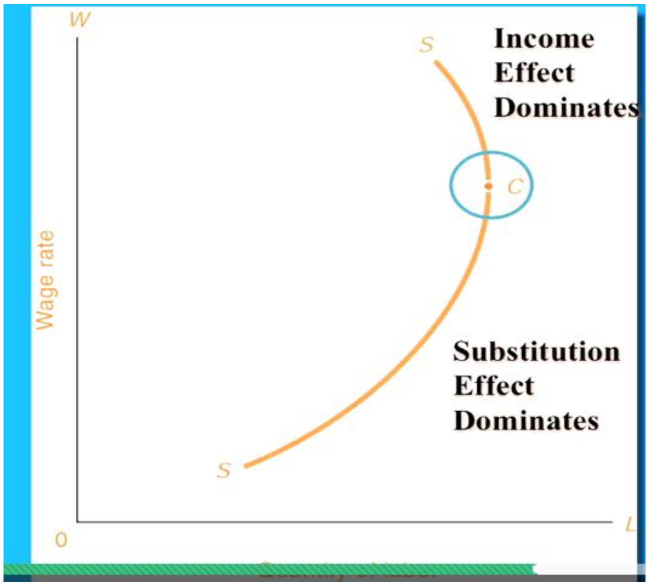
At higher wages, workers can afford more leisure even though each extra hours of leisure cost more in wage foregone.

12. Explain the income effect.

The higher the wage, the higher your income so you will be able to take that extra week of vacation to take the leisure activities.

13. Explain the substitution effect.

The more you work, the more you will earn and the each hour of leisure is more expensive to you as the wage rate rises.



14. How does immigration affect wages? Why?

As immigration increases, every other things being equal, wages tend to decline.

15. What happens to wages at the level of employment under monopsony relative to a perfectly competitive labor market? Why?

Monopsony has the following characteristics:

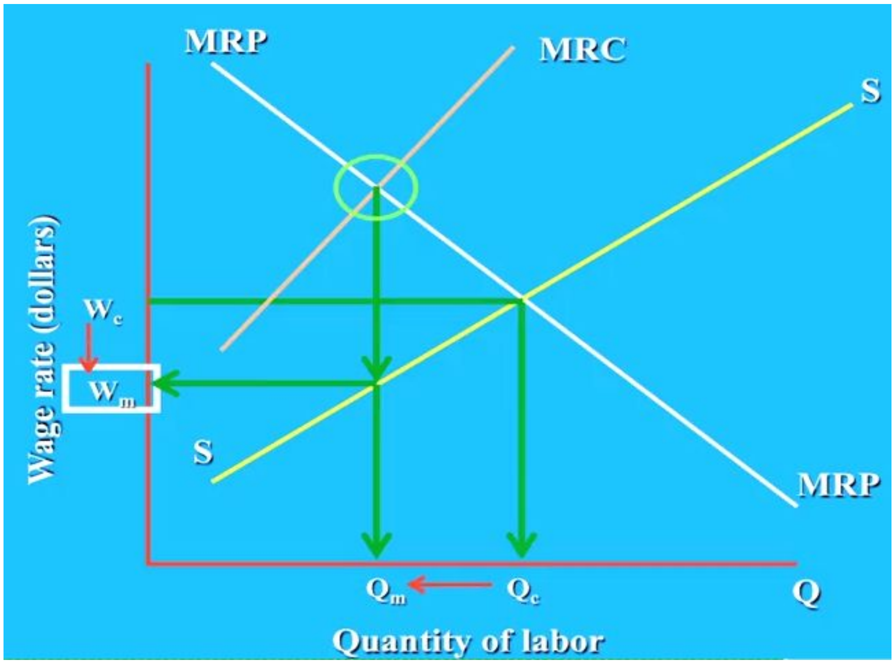
First, the firm's employment is a large portion of the total employment of a particular kind of labor such as coal mining and food processing.

Second, the workers are relatively immobile, meaning workers cannot move to other areas easily, due to family ties or skill limitations.

The wage rate the firm pays varies directly with the number of worker it employs.

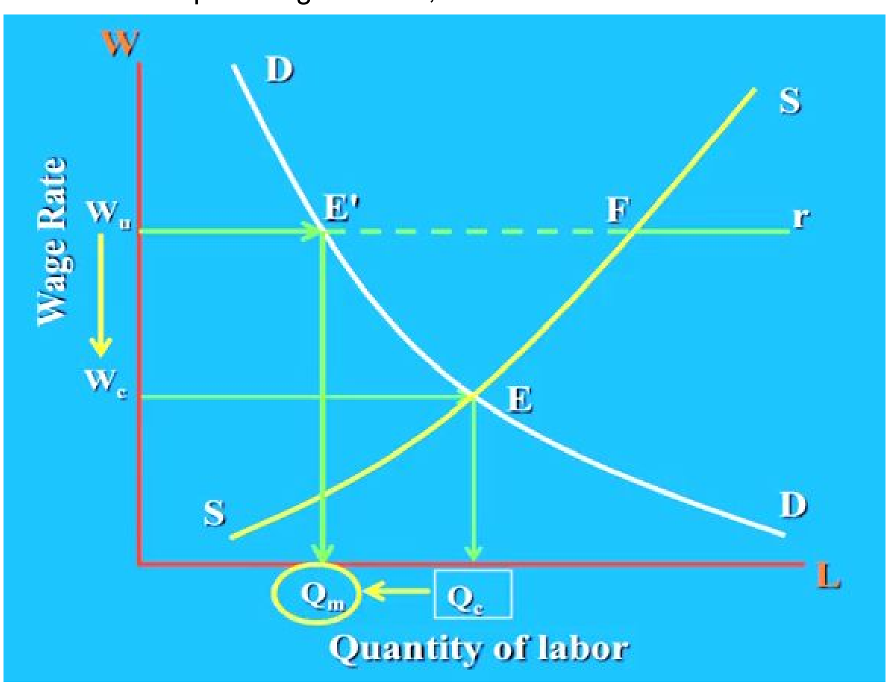
The firm is a wage maker.

The monopsonist's MRC is not equal to the wage paid to the additional worker as in perfect competition but rather is equal to a higher amount.



16. Illustrate a typical equilibrium in a unionized labor market. Are wages high or low? What about employment?

Using their monopoly power, union can compel firms to provide wages, benefits, and working conditions that are above the competitive outcome.
Under a typical collective bargaining agreement, firms agree not to hire non-union plumbers, not to contract out plumbing services, and not to subcontract work to non-union firms.



But under union they hire less workers than under perfect competition.

17. What other factors may account for wage differentials among people in different occupations.

Compensation differentials
Differences in mental and physical capabilities
Human capital: refers to the stock of useful and valuable skills and knowledge that are accumulated by people in the process of their education and training. Investments in training to become doctors rather than lifeguards.
Geographic immobilities: reluctant to leave friends, relatives and associatives.
Institutional immobilities: phd degree in the university to lecture
Sociological immobilities: race and gender.
Non-competing groups

18. What do compensating differentials measure?

Compensation differentials that measures the relative attractiveness of jobs as well as the degree of risks. e.g. compare bank clerks and construction workers.

19. What does human capital refer to?

Human capital: refers to the stock of useful and valuable skills and knowledge that are accumulated by people in the process of their education and training. Investments in training to become doctors rather than lifeguards.

20. Name three immobilities that are sources of wage differentials.

Geographic immobilities: reluctant to leave friends, relatives and associatives.
Sociological immobilities: race and gender.
Institutional immobilities

21. What are non-competing groups and how do they affect wages?

Non-competing groups: Instead of labor being a single factor of production, it is many different, but closely related, factors of production. There are many different occupations and skills that compete in only a general way.
People are part of a particular labor sub-market. We are then subject to the supply and demand for that skill and will find that our own labor earnings will rise and fall depending on events in that occupation and industry.

Lecture 11:

1. On a personal level, what kinds of questions can capital analysis help us answer?
Should I rent or buy a home now?
Should I quit my job to go back to school for a business or law degree?
Should I buy that expensive, energy-efficient refrigerator or pop for the cheaper model?
Should I invest in a portifolio of high-risk high-technology stocks or settle for some safer, tax-free municipal bonds?
2. At a professional level, capital analysis can help business executives answer what kinds of questions?
Should I invest in new plant and equipment?

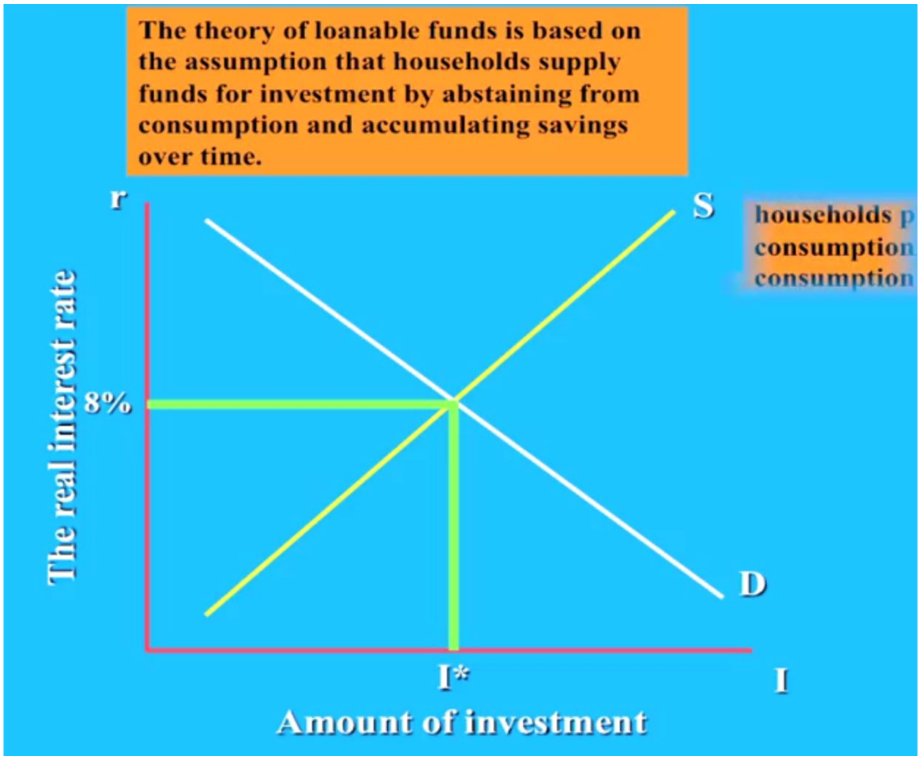
Should I expand my firm?
How much inventory should I maintain?
3. What are the three categories of capital goods?
Structures such as factories and homes.
Consumer durable good such as automobiles and producer durable equipment like machine tools and computers
Inventories and include things like cars in dealers lots

4. What do we mean by loanable funds? What is the price paid for the use of loanable funds?
The price paid for the use of loanable funds, where the term loanable funds is used to describe funds that are availalble for borrowing.
The interest rate is the amount of money that must be paid for the use of one dollar of loanable funds for a year. Because it is paid in kind, interest is typically stated as a percentage of the amount of money borrowed rather than as an absolute amount.

5. Suppose a company buys a used car for $10,000, rents it out for $2,500 per year and earns a net rental of $1200 each year after expenses. What is the rate of return?
The additional revenue is usually measured as a percentage rate per unit of time -- the annual net return per dollar of invested capital -- which is why it is called the rate of return.

6. Define depreciation.
Both investment and depreciation are flow concepts, meaning that they are measured per unit of time. Capital which is a stock concept, meaning that capital is measured at a given point of time.
Depreciation is an estimate of the loss in the dollar value of a capital good due to obsolescence or wear and tear during a period of time.
When depreciation over a period of time exceeds investment over the same period of time, the capital stock will decrease whereas if investment exceeds depreciation, the capital stock will increase.

7. The theory of loanable funds is based on what assumption? The upward sloping supply curve of loanable funds reflects what idea?



Firms will demand loanable funds to invest in new projects so long as the rate of return on capital is greater than or equal to the interest rate paid on funds borrowed.
The theory of loanable funds is based on the assumption that households supply funds for investment by abstaining from consumption and accumulating savings over time.
The upward sloping supply curve of loanable funds reflects the idea that households prefer present consumption to future consumption and must be paid an interest rate bribe to induce them to save rather than consume.
It is business that demand loanable funds to build new plants or warehouses or to purchase machines and equipment.
8. The market interest rate serves what two functions?
It rations out society's scarce supply of capital goods for the uses that have the highest rates of return.
It induces people to sacrifice current consumption in order to increase the stock of capital.

9. Suppose the Federal government significantly expands the Social Security retirement program to cover more fully the costs of hospitalization and retirement. What is this likely to do to the supply curve for loanable funds and the market rate of interest?
It will shift the supply curve for loanable funds inward and raise the market rate of interest.

10. Suppose the economy had been in a deep recession, but is moving now towards full employment. What will happen to the interest rate, and why?
The demand curve will move outward and push a rise in the interest rate
11. How do you evaluate an investment when your capital outlay occurs today but the benefits from that investment come in the form of a revenue stream over many years?

net present value
12. How is net present value defined and measured? What lump sum of money today would make you at least as well off as the stream of rental payments that you would get over the life of the building?
NPV is defined as the dollar value today of a stream of income over time. Measured by calculating how much money invested today would be needed, at the going interest rate, to generate the asset's future stream of receipts.

Net additional investment

13. What is a perpetuity? Write the formula to evaluate a perpetuity.
A perpetuity is an asset like land that lasts forever and pays a certain amount of dollars per year from now to eternity.
14. Write the general formula for calculating net present value.
V = N / i
V is the present value of the land
N is the permanent annual receipts from the land
i is the interest rate in decimal terms

15. Suppose you have a choice between a new, energy-efficient refrigerator which costs $750 or the cheaper model at $500. If you buy the energy-efficient refrigerator, your electricity bill will be $120 a year less over the 5-year life of the refrigerator. Assuming an interest rate of 8 percent, which refrigerator should you buy?

16. To what does the "term structure of interest rates" refer?

$$NPV = -(I_0) + \frac{N_1}{1+i} + \frac{N_2}{(1+i)^2} + \ldots + \frac{N_t}{(1+i)^t} + \ldots$$

17. How do risk premium, length of maturity, loan size, and taxability each affect the interest rate?
The higher rate for risk is known as the risk premium.
length of maturity: The longer the term of the loan, the higher usually is the interest rate.
Loan size: Given two loans that are equal in both length and risks, the interest rate usually will be somewhat higher on the smaller of the two loans because the administrative costs of a large and a small load are about the same.
Taxability: Interest on certain state and municipal bonds is tax exempt.
18. Show how, by sacrificing current consumption and building capital goods today, societies can increase their consumption in the future.

Taxpayers heavily subsidize public education.

The government imposes a wide range of health, safety, and environmental regulations on private companies.
Government also takes a large tax bit out of your profits or wages.

Lecture 12
1. Name five ways in which government intervenes in the free market.

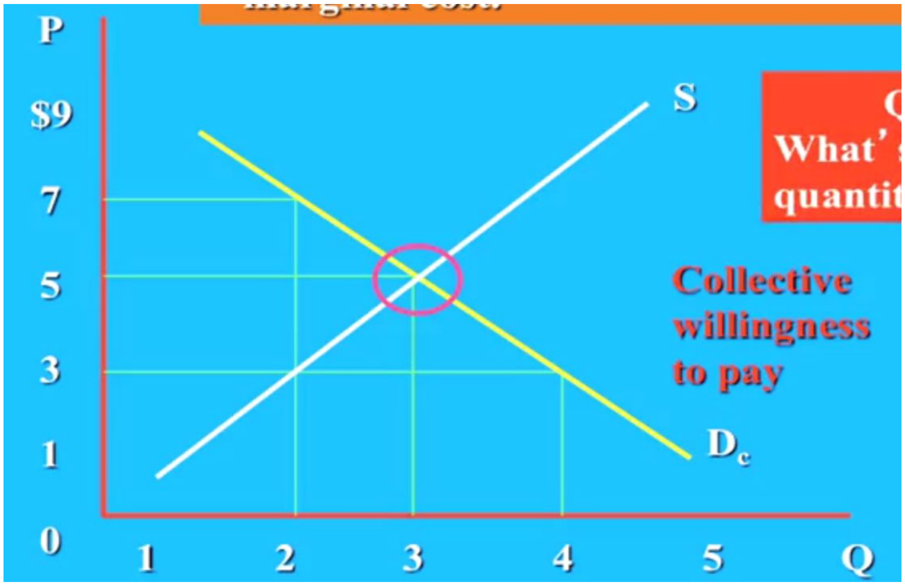
2. Contrast private versus public goods.
Private goods
Private goods are divisible.
A private good is rival in consumption
A private good is subject to the exclusion principle

Public goods are indivisible.
Public goods are nonrival in consumption.
non-excludability

3. Describe the free rider problem. Provide several examples.
Potential buyers don't want to pay for a good they can get free.
Nor will they want to reveal their true preference as to how much they would be willing to pay for it prior to its provision for fear of being taxed that amount.
4. On what does the economic difference between public goods and private goods rest?

5. The market demand curve for private goods is what sum? How does this differ from the market demand for a public good.
The market demand for a private good is the horizontal
summation of the individual demand schedules. Due to this, individual consumers will pay the same price for a good but consume different quantities.
The market demand curve for a public good is the vertical sum of the individual demand curves. Individual consumers will consume the same amount of the good but value that amount at different prices.

6. Illustrate the optimal quantity of a public good.

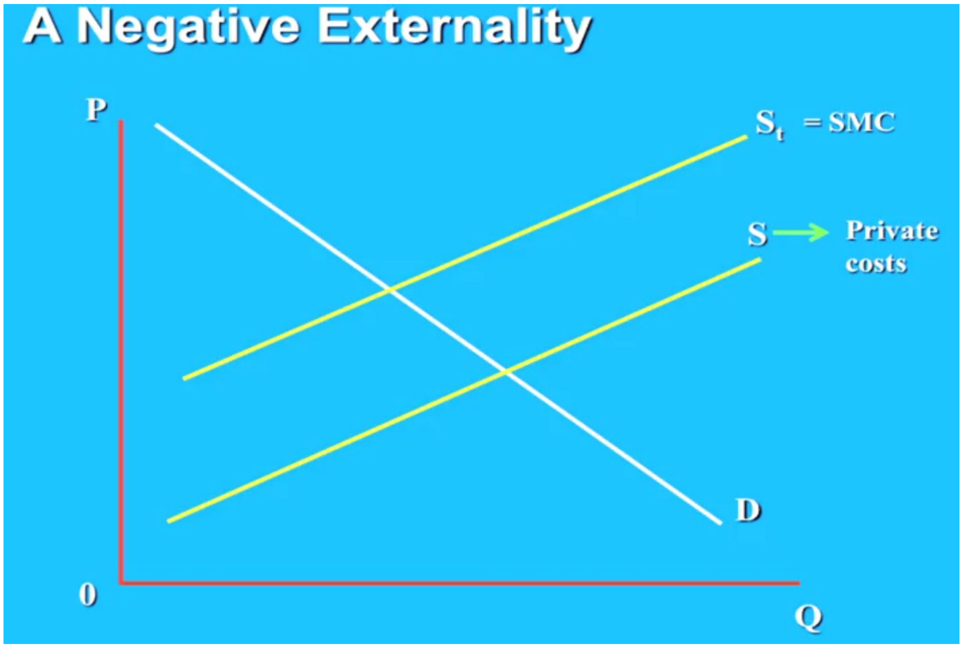


7. What is the benefit-cost decision rule.?
Benefits come from the reduction in damage to the land in the valley in the event of a flood.
Costs are the loss of satisfaction associated with the accompanying decline in the production of private goods or some other public good.
Benefit>Cost, do it. Otherwise, don't

8. The best way to make government more efficient is to always reduce government spending. Agree or disagree?
No
Efficient government does not necessarily mean minimizing public spending. Use tools like benefit-cost analysis to efficiently allocate resources between the private and public sectors until no net benefits can be had from further re-allocations of resources.

9. What is the idea behind externalities?
The production or consumption of a good may generate spillover effects.
External benefits or costs are not accurately reflected in the supply and demand curves of producers and consumers.

10. Provide a negative externality example. Illustrate the problem and indicate where equilibrium is in a free market. Is this optimal?
Dump toxic wastes into a nearby river to minimize the costs.
Not reflected in the supply-demand curve.
Negative externality: The free market is likely to produce too much of the externality and too much of the good generating the externality.



11. Provide a positive externality example. Illustrate the problem.
Vaccinations.
Problem: The free market tends to lead to the underconsumption of goods that yield positive externalities -- from vaccinations to education.
The market under-supplies the good and generates too few spillover benefits
.
12. Explain the Coase Theorem and its implications for government intervention into the market.
The government intervention into the marketplace may not be necessary becase externalities can be solved through individual bargaining.
It states negative or positive externalities do not require government intervention where property ownership is clearly defined.
the number of people involved is small and
bargaining costs are negligible.

13. What is the importance of assigning property rights in the Coase Theorem
?
Who has to pay whom to eliminate the externality is completely determined by the initial assigning of property rights.

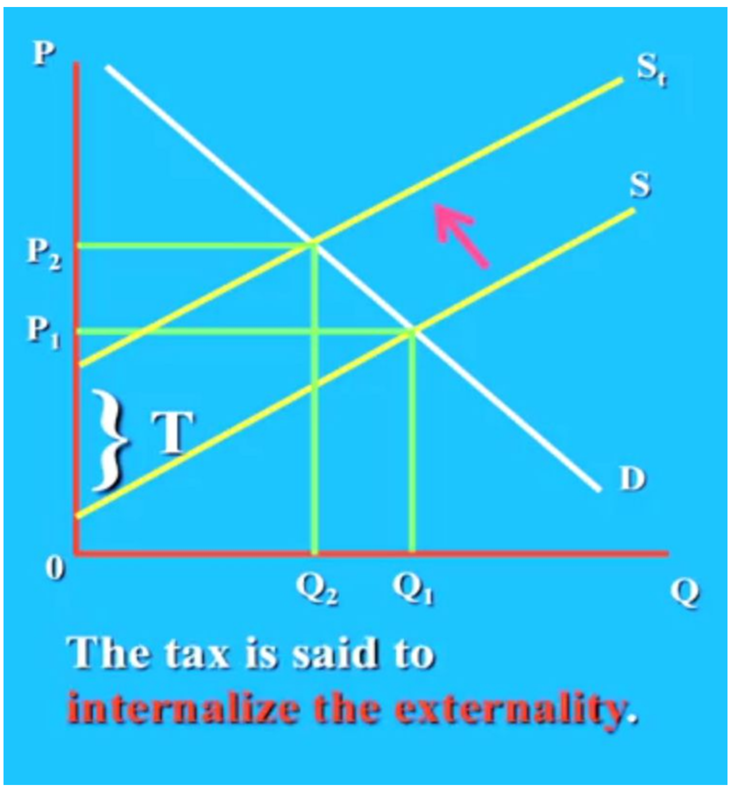
14. How might the Coase Theorem break down?
The consensus might be hard to reach before the bargain.

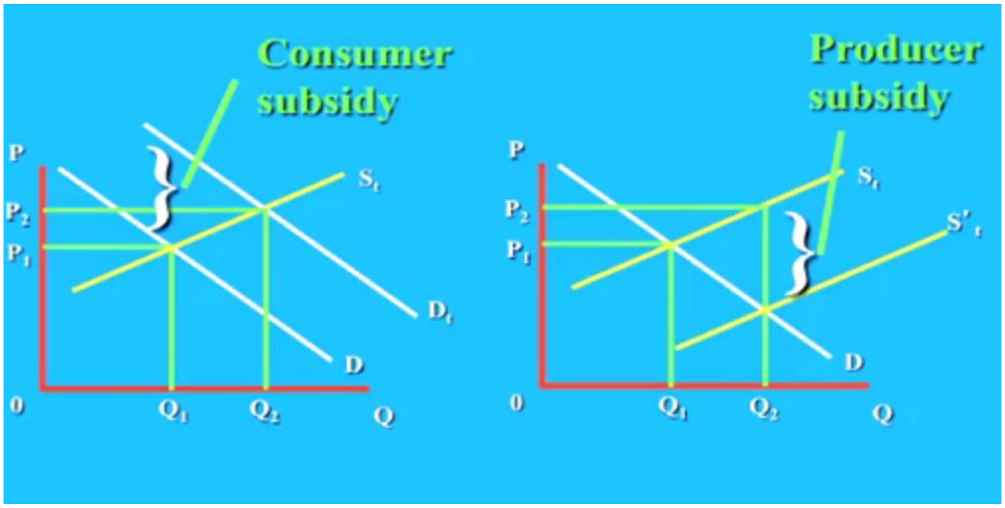
15. A second approach to internalizing externalities relies upon a legal framework of liability laws. Describe this framework.
Tort system

The idea behind torts is that the person or corporation that produces the negative externality is legally liable for any damages caused to other persons.
Lawsuits are expensive, time-consuming and have uncertain outcomes.
Major time delays in the court system are commonplace.
Many negative externalities do not involve private property, but rather property held in common.

16. Illustrate how direct controls can force new firms to incur costs associated with pollution control.
Direct government intervention involves placing limits on the amount of pollution a polluter may emit.
In theory, if the direct controls are administered properly, the firm can be forced to operate at the desired efficient equilibrium.

17. Explain and illustrate how Pigouvian taxes can be used to internalize externalities.
Tax negative externalities and subsidize positive externalities.





18. Why does the U.S. provide free vaccines to children?
Pigouvian taxes for free to advocate the vaccines.
Where spillover benefits are extremely large, the government may decide to provide the product as a public good as an alternative to subsidization.