

Principles of Microeconomics Exam Notes

Week 1: Introduction to Microeconomics

Learning objectives

- Understand how to think like an economist
- Understand the concepts of tradeoff, opportunity cost, and marginal analysis
- Apply these concepts to understand production possibilities frontier, and
- The concept of comparative advantage and the gains from trade

Economic Questions

Economics deals with allocation of scarce resources

- Market or non-market allocation mechanisms

Positive Analysis → what goods and services will be produced

- The world as it is

Normative Analysis → what goods and services should be produced.

- How the world should be

All economic decisions involve **choice**.

Three key factors in decision making

- 1) Every decision entails a **tradeoff**
 - a) If a resource is allocated to one activity, it cannot be allocated to another
 - b) Make a choice that maximises surplus
 - i) Benefits - Costs
 - 2) **Opportunity cost** of an activity is the value of the next best alternative you must give up for that activity.
 - 3) Rational people think **at the margin**
 - a) One should only take an action if, and only if, the extra benefits from taking the action are at least as great as the extra costs.
 - b) Example:
 - i) It costs \$20,000 to hire, fuel and crew a plane with 100 seats to Bali and back. The extra cost of each additional passenger (fuel, food, airport fees, etc.) is \$50 per passenger. You set the price of a ticket at \$400 and sell 80 tickets (total revenue is \$32,000 and total cost is $\$20,000 + \$50 \times 80 = \$24,000$). Just before take-off a new potential passenger offers you \$100 to join the flight.
 - (1) Should you accept the offer?
Case 1 – reject the passenger (and the \$100).
 - (2) Then you still make \$32,000 revenue. Your costs are still \$24,000. So your profit is \$8,000.
 - Case 2 – accept the passenger (and the \$100)
 - (3) Your revenue goes up by the \$100 to \$32,100. But your costs also rise by the extra cost of \$50 for the passenger to \$8,050. So your profit is \$8,050.
- Bottom line
- (4) You make an extra \$50 profit if you accept the last-minute passenger. This is the decision you would make by comparing the extra revenue (\$100) and the extra cost (\$50) of the last-minute passenger.

Shifts in Demand Curve

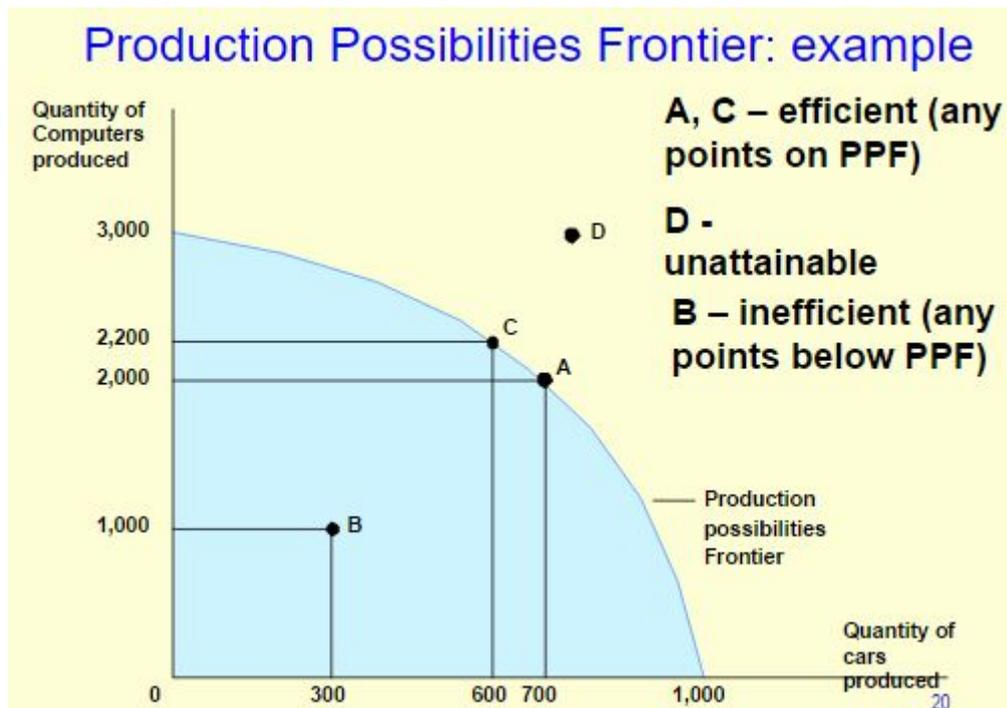
When **income decreases**, the demand curve shifts to the **left**.

When **income increases**, the demand curve shifts to the **right**.

Production Possibilities Frontier (PPF)

A graph showing the various combinations of output that the economy can possibly produce using the available factors of production and technology.

Useful in understanding the concepts of opportunity cost and efficiency,



If the economy is producing at B, it may be because:

- May not want to produce any more
- Society may not be able to afford the “efficient” results

How could the economy choose D?

- Technology and commercial developments and advancements.
- Greater number of resources.

If the economy chooses C instead of A, there is an opportunity cost of 100 cars.

Opportunity Cost and gains from trade

Trade can benefit everyone in society because it allows people to specialise in activities in which they have a comparative advantage.

Comparative Advantage

Imagine: There are only two goods (cars and rice), and they are produced by only two countries (Australia and Japan).	Resource endowment: Australia has 100 units of labour, and Japan has 500 units of labour.
Technology: Australia (5 units of labour for 1 car, 1 unit of labour 1 ton of rice), Japan (10 units of labour for 1 car, 5 units of labour for 1 ton of rice).	Questions: Should they trade? If so, what should each produce? And at what terms should they trade?
Should they trade? Yes, they should. Australia should produce 100 cars and Japan	Opportunity Cost

should produce 50 tons of rice.	<table border="1"> <thead> <tr> <th></th> <th>Japan</th> <th>Australia</th> </tr> </thead> <tbody> <tr> <td></td> <td>2 tons of rice</td> <td>5 tons of rice</td> </tr> <tr> <td></td> <td>1/2 car</td> <td>1/5 car</td> </tr> </tbody> </table>		Japan	Australia		2 tons of rice	5 tons of rice		1/2 car	1/5 car			
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<p>Consumption before (after) trade: Assuming that before trade Aus chooses (15,25) and JPN chooses (25,50) on PPF.</p> <table border="1"> <thead> <tr> <th></th> <th>Japan</th> <th>Australia</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td></td> <td>25 (30)</td> <td>15 (20)</td> <td>40 (50)</td> </tr> <tr> <td></td> <td>50 (60)</td> <td>25 (40)</td> <td>75 (100)</td> </tr> </tbody> </table>		Japan	Australia	Total		25 (30)	15 (20)	40 (50)		50 (60)	25 (40)	75 (100)	<p>Yes, they should trade. Each country should produce what it has a comparative advantage in. They should trade on the terms of each country's opportunity costs.</p>
	Japan	Australia	Total										
	25 (30)	15 (20)	40 (50)										
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Terms of Trade

This is the relevant price.

In the above example, any price between 1 car for 2 tonnes of rice (Japan's opportunity cost) and 1 car for 5 tonnes of rice (Australia's opportunity cost) are acceptable.

Absolute advantage → the comparison among producers of a good according to their productivity.

- The producer that requires a smaller quantity of inputs to produce a good is said to have an absolute advantage in producing that good.

Comparative advantage → the comparison among producers of a good according to their opportunity cost.

- The producer who has the smaller opportunity cost of producing a good is said to have a comparative advantage in producing that good.

Gains from trade → when each person specialises in producing the good for which he has a competitive advantage, total production in the economy rises.

- This increase in the size of the economic pie can be used to make everyone better off.

Bargain → where each party benefits from trade by obtaining a good at a price that is lower than his or her opportunity cost of that good.

Imports → goods produced abroad and sold domestically

Exports → goods produced domestically and sold abroad.

Interdependence and trade are desirable because they allow everyone to enjoy a greater quantity and variety of goods and services.

Week 2: Demand, Supply and Market Equilibrium

Learning objectives

- The perfectly competitive market
- Determinants of demand; distinguish between the shifts in demand and movement along the demand curve
- Determinants of supply; distinguishing between the shifts in supply and the movement along the supply curve
- Market equilibrium and the changes in equilibrium

What is a market?

A market is a group of buyers (demand) and sellers (supply) of a particular good or service.

The sides interact to determine the prices and quantities exchanged, called the 'market equilibrium'.

(Perfectly) competitive market

A market in which there are so many buyers and sellers so that no single buyer or seller can influence the market price.

The goods being offered for sale are perfect substitutes (to the eyes of the buyers, they are the same).

Demand

Quantity demanded → the amount of a good that buyers are willing and able to purchase.

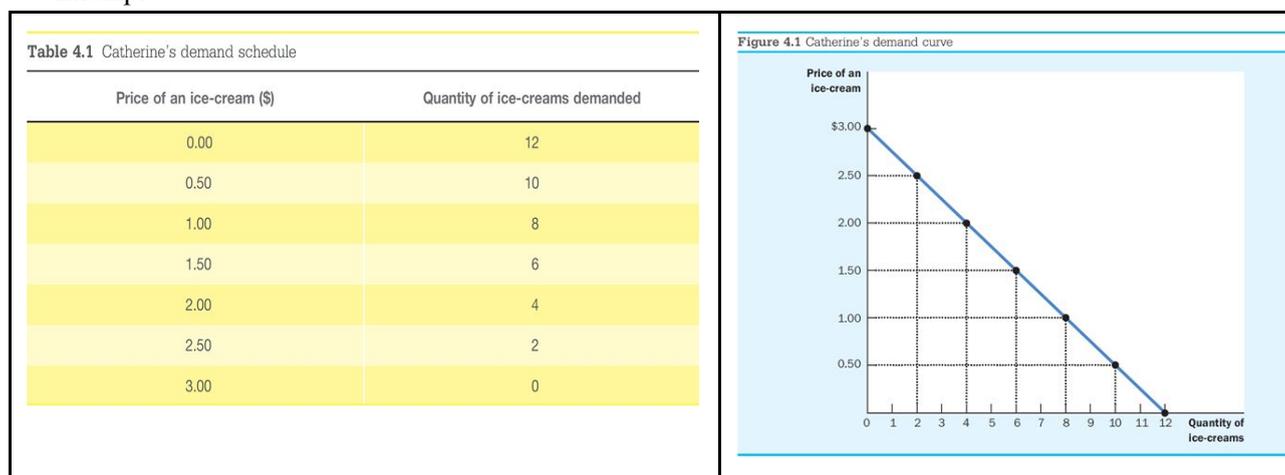
Law of demand → the claim that, other things being equal, the quantity demanded of a good falls when the price of the good rises.

A person's demand (schedule, curve, function) relates to the person's quantity demanded at the price of a good, holding all other relevant factors fixed.

Demand schedule → a table that shows the relationship between the price of a good and the quantity demanded (holding relevant influences constant).

Demand curve → a graph of the relationship between the price of a good and the quantity demanded (generally downward sloping).

Example:



Market Demand vs Individual Demand

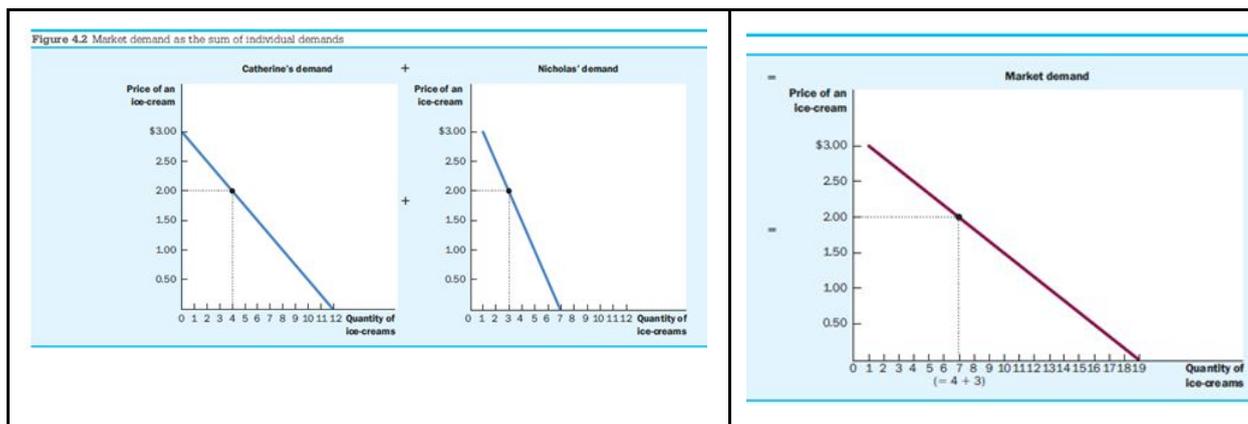
The market demand is the horizontal sum of all the individual demands for a particular good or service.

Example:

There are two buyers in the market: Catherine and Nicholas.

When price = \$2, total quantity demanded in the market is $4 + 3 = 7$.

Horizontally adding up the individual quantities demanded at each price leads to market demand.



Shifts in demand

Any change that **increases the quantity demanded** at any given price shifts the **demand curve to the right** (*increase in demand*).

Any change that **reduces the quantity demanded** at every price shifts the **demand curve to the left** (*decrease in demand*).

Variables that can shift the demand curve:

Income

- A lower income means that you have less to spend in total, so you would have to spend less on some goods.
- If the demand for a good falls when income falls, the good is called a **normal good**.
- If the demand for a good rises when income falls, the good is called an **inferior good**.

Prices of related goods

- **Substitutes** → two goods for which a decrease in price of one good leads to a decrease in the demand for the other good (Ice cream v Frozen Yoghurt).
 - Often pairs of goods that are used in place of each other
- **Complements** → two goods for which a decrease in the price of one good leads to an increase in the demand for the other good
 - Often pairs of goods that are used together (Ice cream & chocolate topping, computers & software, petrol & cars).

Tastes

- If you like a product, you will be more of it.

Expectations

- If you expect to earn a higher income next month, you may choose to save less now and spend more of your current income buying ice-cream.
- If you expect the price of ice-cream to fall tomorrow, you may be less willing to buy an ice-cream at today's price.

Number of buyers

- The more number of buyers there are in a market, the higher the quantity of demand will be at every price and the demand curve would shift to the right.

A change in the good's price represents a movement along the demand curve, whereas a change in one of the other variables shifts the demand curve.

Supply

Quantity supplied → the amount that sellers are willing and able to sell.