23115 – Economics for Business

Week 2 – Supply and Demand

- THE MARKET FORCES OF SUPPLY AND DEMAND

- The theory of **supply and demand** considers how buyers and sellers behave and how they interact with one another.
- It illustrates how the interaction between buyers and sellers determines the quantity of each good or service produced and the price at which it is sold in a market economy.
- A **market** is a group of buyers and sellers of a particular good or service.
- A **competitive market** is a market in which there are many buyers and many sellers so that each has a negligible impact on the market price.
- This means that the smaller the ability of each buyer or seller to affect the market price, the more competitive the market.
- Throughout this subject, we assume that markets are *perfectly competitive* *(PC)*.
- Perfectly competitive markets are defined by 2 primary characteristics – (1) the goods being offered for sale are all the same (homogenous) and (2) the buyers and sellers are so numerous that no single buyer or seller can influence the market price.
- Since buyers/sellers in PC markets must accept the market price, they are '*price takers*'.
- Agricultural market is example in which assumption of perfect competition applies perfectly.
- Some markets have only one seller and this seller sets the price – known as a monopoly.
- Some markets fall between the extremes of perfect competition and monopoly.
- One such market, called an oligopoly, has a few sellers that do not always compete aggressively. Airline routes are an example – e.g. consider a route serviced by only 2 carriers.
- Another type of market is monopolistically competitive; it contains many sellers, each offering a slightly different product. Because the products are not exactly the same, each seller has some ability to set the price for its own product. An example is the software industry. Many word processing programs compete with one another for users, but every program is different from every other and has its own price.

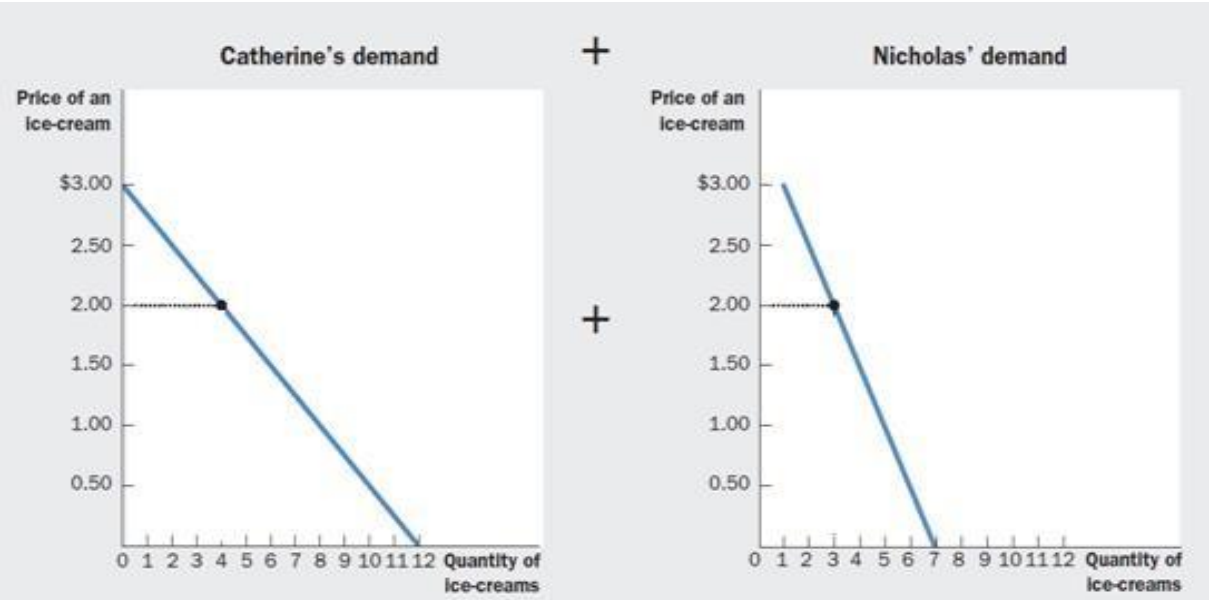
DEMAND

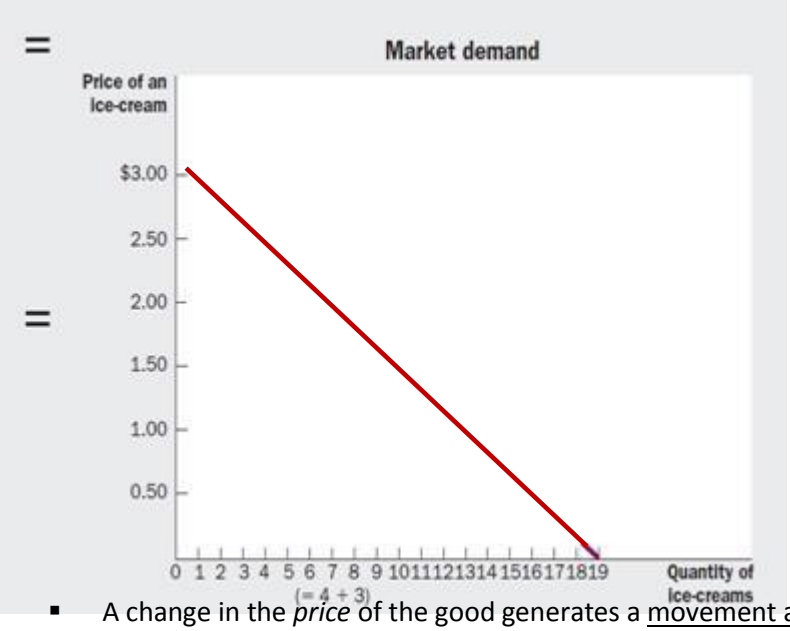
- **Quantity demanded** is the amount of a good that buyers are willing and able to purchase.
- What determines the quantity an individual demands?
- PRICE – this is illustrated by the **law of demand** which is a claim that, other things being equal, the quantity demanded of a good falls when the price of the good rises.
- INCOME – consider the following… **Normal good** is a good for which, other things being equal, an increase in income leads to an increase in demand. **Inferior good** is a good for which, other things being equal, an increase in income leads to a decrease in demand.

- PRICE RELATED GOODS – these are… **substitutes** are two goods for which an increase in the price of one leads to an increase in the demand for the other. **Complements** are two goods for which an increase in the price of one leads to a decrease in the demand for the other.
- TASTES – mainly 'psychological' factors behind the choices of individual.
- EXPECTATIONS - Your expectations about the future may affect your demand for a good or service today. For example, if you expect to earn a higher income next month, you may be more willing to spend some of your current savings buying ice cream.
- The **demand schedule** is a table that shows the relationship between the price of a good and the quantity demanded. While, the **demand curve** is a graph of the relationship between the price of a good and the quantity demanded.

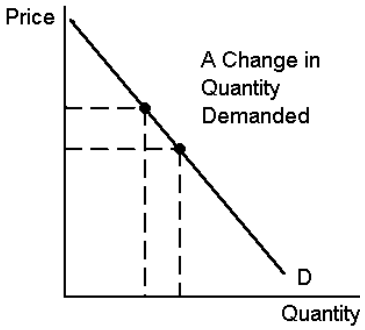
Price of an ice-cream	Quantity of ice-creams demanded
$0.00	12
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0

- Plotting this on demand curve – By convention, the price of ice cream is on the vertical axis, and the quantity of ice cream demanded is on the horizontal axis.
- **Ceteris paribus** is a Latin phrase, translated as ''other things being equal'', used as a reminder that all variables other than the ones being studied are assumed to be constant.
- **Market demand** is the sum of all the individual demands for a particular good or service.
- Graphically, individual demand curves summed horizontally to obtain market demand curve.
- Below is an illustration with TWO buyers in the market…

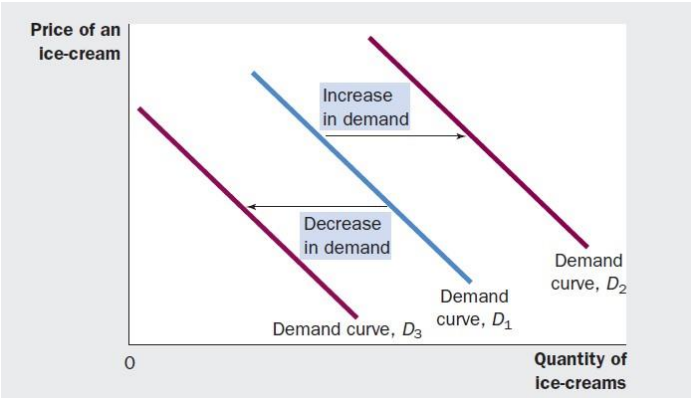




- A change in the *price* of the good generates a movement along the demand curve.
- This is a change in quantity demanded. Also known as a contraction or expansion in demand.



- The demand curve shows what happens to the quantity demanded of a good when its price varies, holding constant all other determinants of quantity demanded. When one of these other determinants changes, the demand curve shifts.
- In this case, we say that there is a change in demand.



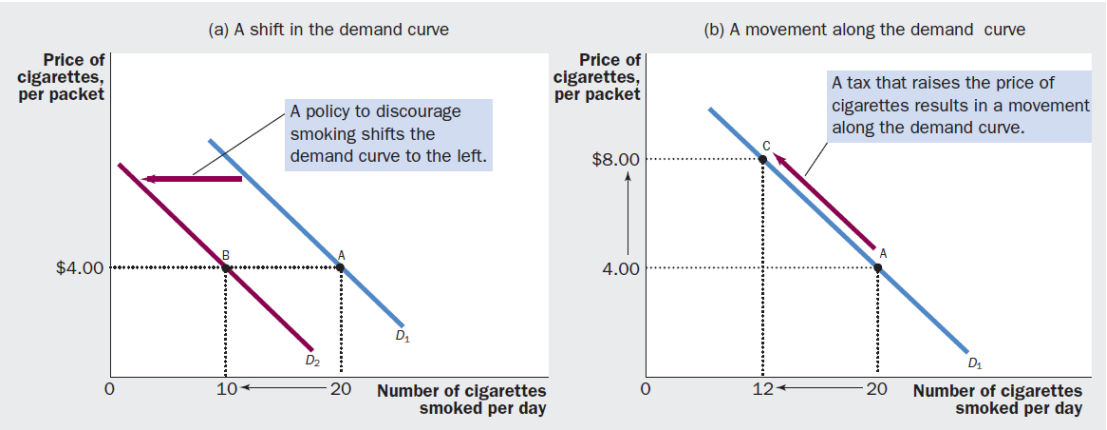
- What are the factors that can cause a shift in demand?
  - **INCOME** – The relationship between income and demand depends on what type of good the product is.
    - *Normal good* – other things being equal, a good for which an increase in income leads to an *increase* in demand.
    - *Inferior good* – other things being equal, a good for which an increase in income leads to a *decrease* in demand.

- **PRICES OF RELATED GOODS** – The relationship between the price of a related good and demand depends on what type of goods the products are.
  - *Substitutes* – two goods for which a **decrease** in the price of one good leads to a **decrease** in the demand for the other good.
  - *Complements* – two goods for which a **decrease** in the price of one good leads to an **increase** in the demand for the other good.
- **TASTES** – If you like something you buy more of it. Economists do not normally try to explain people's tastes; however, they do examine what happens when tastes change.
- **EXPECTATIONS** – E.g. About your future income or about the future price of the good.
- **NUMBER OF BUYERS** – Because market demand is derived from individual demands, it positively depends on the number of buyers.

Suppose policymakers have two ways to reduce the amount that people smoke

a) Implement a policy that discourages smoking (e.g. health warnings on cigarettes packets, advertising on television of negative effects of smoking, etc....)

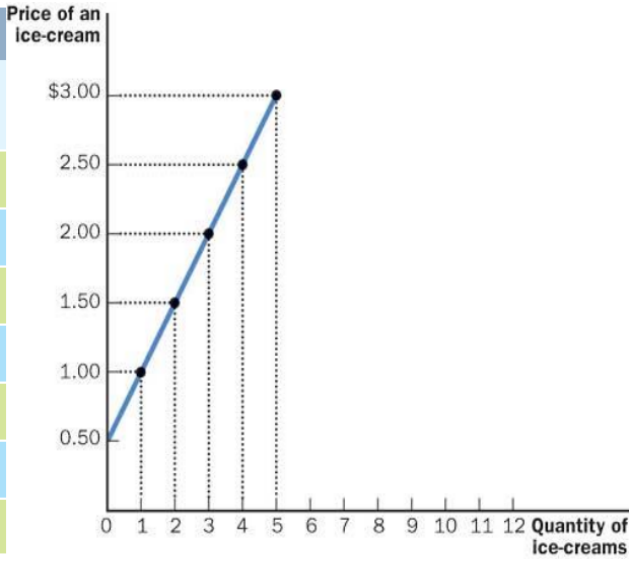
b) Increase the price of cigarettes (for example by increasing taxes on cigarettes)



SUPPLY

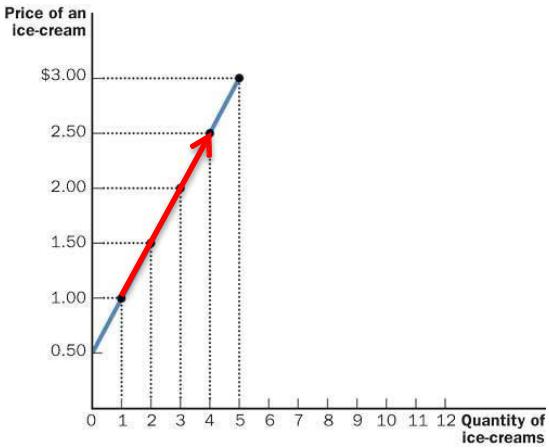
- The **quantity supplied** is the amount of a good that sellers are willing and able to sell.
- The **supply schedule** is a table that shows the relationship between the price of a good and the quantity supplied. The **supply curve** is a graph of the relationship between the price of a good and the quantity supplied.

Table 4.4 Tony's supply schedule	
Price of an ice-cream ($)	Quantity of ice-creams supplied
0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5

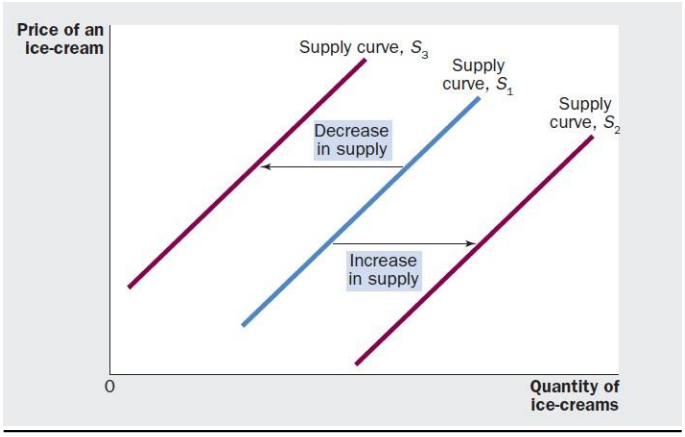


- **Market supply** is the sum of all *individual supplies* for a particular good or service.
  - Graphically, individual supply curves are summed horizontally to obtain market supply curve.
  - The market supply curve shows how the *total* quantity supplied of a good varies with the price of the good, *holding all other factors constant* (our "*Ceteris paribus*" assumption).

- A change in the *price* of the good generates a movement along the supply curve.
  - This is a change in the quantity supplied. Also known as a contraction or expansion in supply.



- Whenever there is a change in any determinant of supply, other than the good's price, the supply curve shifts.
  - In this case we say that there is a change in supply.



- Factors that affect supply (determinants other than PRICE cause a shift in the supply curve)…
  - PRICE – the **law of supply** is the claim that, other things equal, the quantity supplied of a good rises when the price of the good rises.
  - INPUT PRICES – The quantity supplied is negatively related to the price of inputs used to make the good: If the price of an input rises (falls), the supply decreases (increases).
  - TECHNOLOGY – An improvement in production technology increases productivity: with the same inputs, the producer can supply more at any given price.
  - EXPECTATIONS – e.g. if suppliers expect the price to rise they will be more likely to store some of the goods and supply less to the market today.
  - NUMBER OF SELLERS – Because market supply is derived from individual supply, it positively depends on the number of sellers.

SUPPLY AND DEMAND TOGETHER

- **Equilibrium** is a situation in which supply and demand have been brought into balance.
- At the equilibrium price, the quantity of a good that buyers are willing and able to buy exactly balances the quantity that sellers are willing and able to sell.
- **Equilibrium price** is the price that balances supply and demand.
- Sometimes called the market-clearing price because, at this price, everyone in the market has been satisfied (buyers bought all they want to buy and sellers sold all they want to sell).
- **Equilibrium quantity** is the quantity supplied and the quantity demanded when the price has adjusted to balance supply and demand.
- Note – both the equilibrium price and equilibrium quantity can be determined by looking at where the supply and demand curves INTERSECT.