Demand and Supply

Part 1 – The Basics

Recap

- In economics, a **market** involves the interaction between buyers and sellers, where through a **process of exchange**, goods are bought by buyers and sold by the sellers.

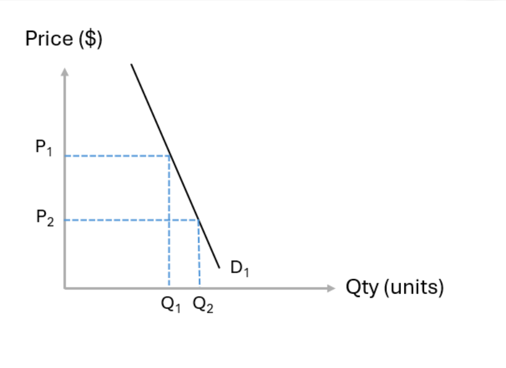
- Through this **market mechanism**, the forces of demand and supply determine the **market price**.

Demand

- **Definition**: Demand is the willingness and ability of consumers to purchase a given good at various prices over a given time period, *ceteris paribus*

- Represented by the Demand Curve

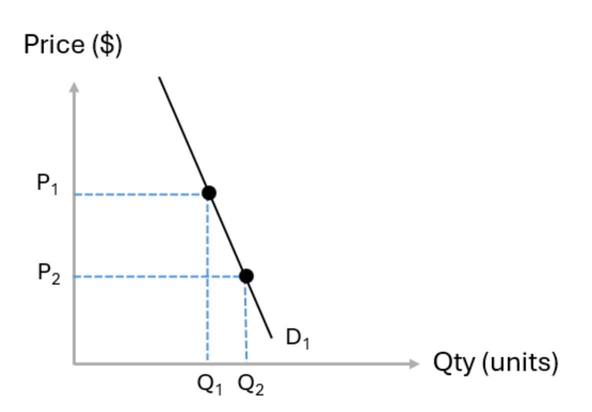
- Change in demand is caused by non-price factors

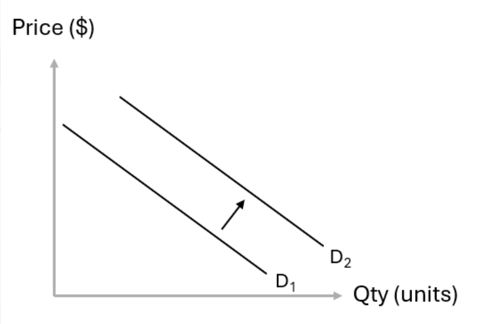


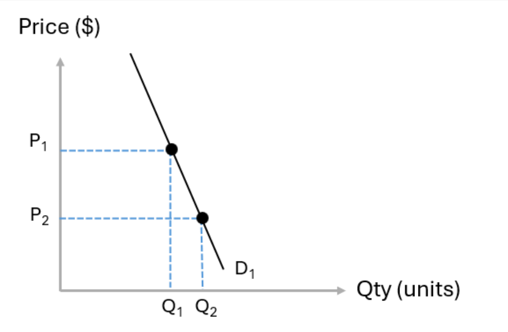
Law of Demand: The price of a good is inversely related to it's price, ceteris paribus. The higher the price of a good, the lower the *quantity demanded* of a good. The downward slope reflects **diminishing marginal utility**.

Quantity Demanded

- **Definition:** Quantity demanded refers to a particular quantity that the consumer is willing and able to buy at a particular price.
- Represented by a point on the demand curve
- Change in quantity demanded (Q_D) is due to a change in price



<table>
<tr><th></th><th>Demand</th><th>Quantity Demanded</th></tr>
<tr><td>Changed by</td><td>Non-price determinants</td><td>Price</td></tr>
<tr><td>Graphical representation of change</td><td>

e.g. Changing consumer preferences towards retro -> increased demand for film cameras -> <u>shift</u> in demand curve from D_1 to D_2</td><td>

e.g. Price of film cameras drops from $100 to $50 -> increased quantity demanded for film cameras -> <u>movement along</u> demand curve from Q_1 to Q_2</td></tr>
</table>

Factors influencing Demand (PTIDE)

1. **Taste & Preference**
    - Consumer's taste and preference are always changing.
    - The more desirable consumers find a good, the more willing they are to pay for it, and therefore the higher the demand. *(e.g. Bubble Tea)*

☆ 2. **Income (YED)**
    - A increase in income allows consumers to have a greater purchasing power, influencing demand for goods.
      Normal Goods: Increased Y leads to <u>increase</u> in demand *(e.g. Noodles)*
      Inferior Goods: Increased Y leads to <u>decrease</u> in demand *(e.g. Cup Noodles)*

3. **Expectations**
    - Future income/price expectations may influence consumers' present demand for goods.
      e.g. If consumers expect a recession (↓ future Y), families would save more money, <u>decreasing</u> present demand for goods

Factors influencing Demand (PTIDE)

4. **Demographics**
    - Changes in demographics may lead to changes in demand
      e.g. An aging population leads to an increased demand for healthcare and social care services

☆ 5. **Price of related goods (XED)**

Substitutes: Pair of goods that can be consumed as an alternative to another

e.g. Coca-Cola and Pepsi

Complements: Pair of goods that are consumed together to satisfy the same want

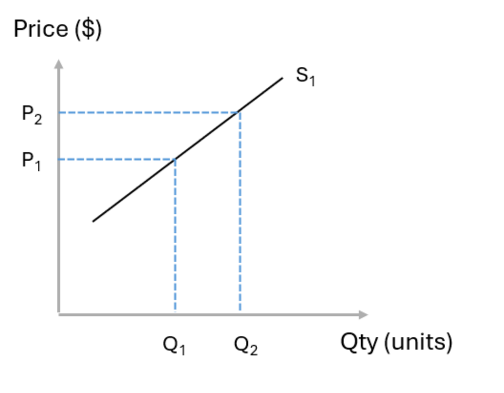
e.g. Cars and Gasoline

Supply

- **Definition**: Supply is the willingness and ability of producers to provide a given good at various prices over a given time period, *ceteris paribus*

- Represented by the Supply Curve

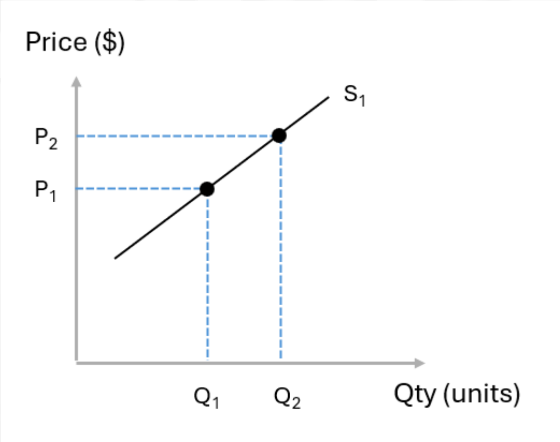
- Change in supply is caused by non-price factors

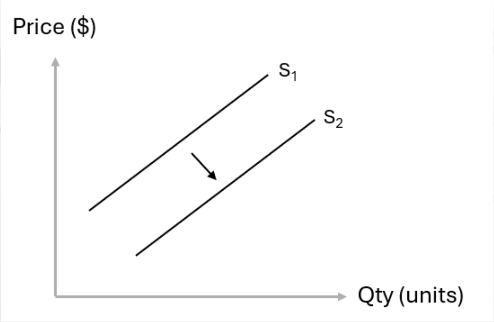
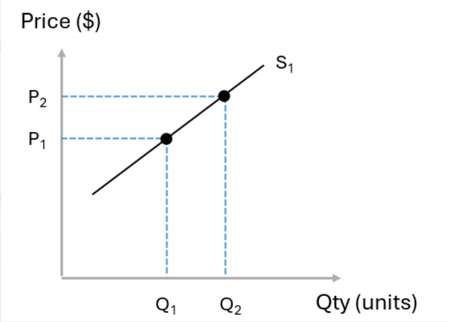


Law of Supply: The price of a good is directly related to it's price, ceteris paribus. The higher the price of a good, the greater the *quantity supplied* of a good. The upwards slope reflects **diminishing marginal returns**.

Quantity Supplied

- **Definition:** Quantity supplied refers to a particular quantity that the producer is willing and able to provide at a particular price.
- Represented by a <u>point</u> on the supply curve
- Change in quantity supplied (Q_S) is due to <u>a change in price</u>



	Supply	Quantity Supplied
Changed by	Non-price determinants	Price
Graphical representation of change	 e.g. Changing consumer preferences towards retro -> increased **demand** for film cameras -> <u>shift</u> in demand curve from D_1 to D_2	 e.g. Price of film cameras drops from $100 to $50 -> increased **quantity demanded** for film cameras -> <u>movement along</u> demand curve from Q_1 to Q_2

Factors influencing Supply (CPPSE)

1. **Cost of production (COP)**
   - Influenced by production methods, the cost of factor inputs or taxes/subsidies
     e.g. More efficient machinery leads to <u>lower</u> COP, <u>increasing</u> supply for bread
     e.g. Increase in egg prices (factor input) leads to <u>higher</u> COP, <u>decreasing</u> supply for bread

2. **Expectations**
   - If producers foresee an <u>increase in the future prices</u>, they may choose to withhold supply from the market now (by building up their inventory) to gain higher profit when sold in the future at higher prices. Hence, present supply <u>decreases</u>.

3. **Number of Producers**
   - Higher barriers to entry lead to a decrease in the number of producers in the market.
   - Less producers willing to enter the market results in a decreased supply of goods

Factors influencing Supply (CPPSE)

4. **Prices of related goods**
    - Goods in Joint Supply: Pair of goods that are produced together using the same resources
      e.g. Production of Beef & Leather (by-product) from Cows

    - Goods in Competitive Supply: Pair of goods that share the same factor of production; producing more of one leads to lower production of another
      e.g. Planting wheat or corn in a single plot of land

5. **Supply Shocks**
    - Adverse natural (droughts/floods) or man-made conditions (wars) affects producers' ability to produce a good, leading to supply to fall.
      e.g. Declining crop yield due to increased droughts from climate change

Analysing changes in demand/supply

1. **Identify** demand/supply factor
2. **Explain/Contexualise** factor to the question
3. **Direction of change** of demand/supply curve
4. **Effect** on Price (P) or Quantity (Q)

***Graph** (for 5m+ questions) + Explanation*

<u>**Practice 1:**</u> Explain 2 factors that have led to an increase in the <u>consumption</u> of beef from 2025 and 2005 [4m]

☆ Common misconception: Consumption ≠ only refer to demand factors! Increasing supply can increase consumption (<u>by increasing Q</u>).

Explain using 1 demand and 1 supply factor

Analysing changes in demand/supply

Practice 1: Explain 2 factors that have led to an increase in the <u>consumption</u> of beef from 2025 and 2005 [4m]

Any demand factor [2m]

1. An increase in income level [0.5] -> increase in purchasing power [0.5] -> increase demand for beef, demand curve **shift right** [0.5] -> increase in quantity consumed of beef [0.5]
2. Growing population [0.5] -> increase in size of market [0.5] -> increase demand….

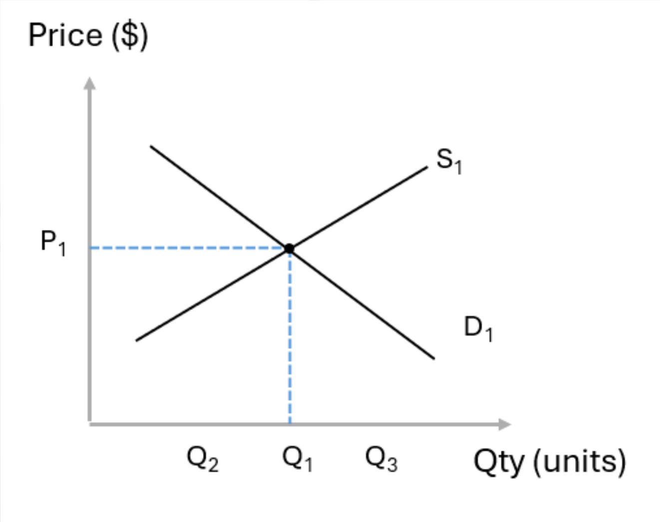
Any supply factor [2m]

1. Improvements in technology [0.5] -> lowered cost of production [0.5] -> increase supply for beef, supply curve **shift right** [0.5] -> **fall in price of beef** increases quantity consumed of beef [0.5]

As both demand and supply increases, the total consumption of pork increases.

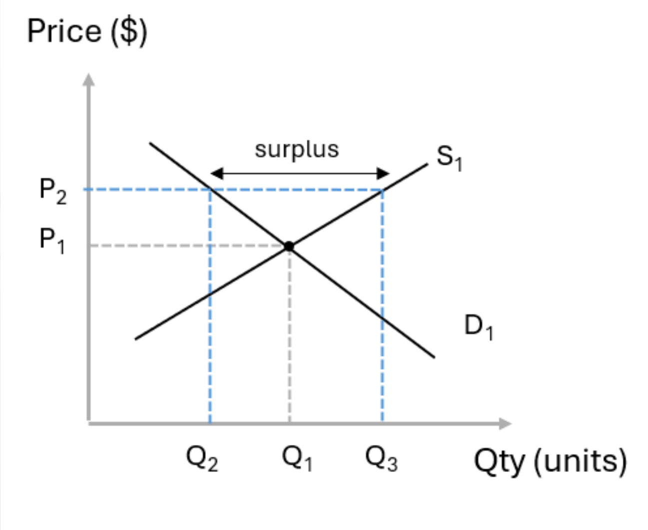
Price Mechanism

- Intersection of demand and supply determines the equilibrium price and quantity
- In the diagram below, the demand and supply intersect at a price (P_1) & equilibrium quantity (Q_1)



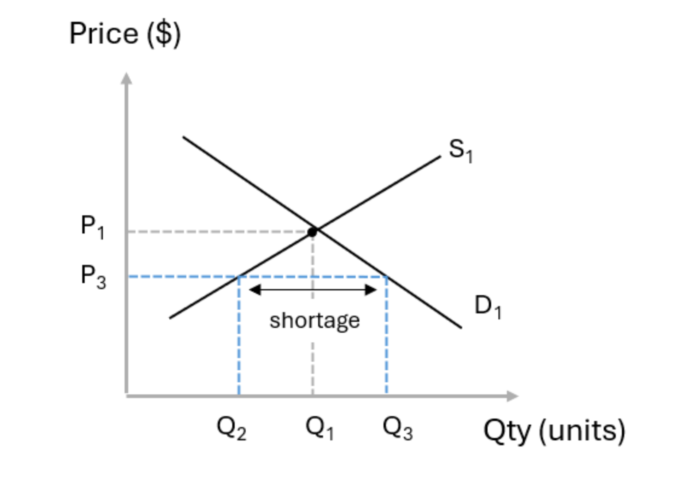
Price Mechanism

- When Price is at P_2, Quantity demanded is at Q_2 and Quantity supplied is at Q_3
- This causes a **surplus** of Q_3-Q_2, leading to a downward pressure on price until equilibrium is obtained, where quantity demanded = quantity supplied



Price Mechanism

- When Price is at P_3, Quantity demanded is at Q_3 and Quantity supplied is at Q_2
- This causes a **shortage** of Q_3-Q_2, leading to a upwards pressure on price until equilibrium is obtained, where quantity demanded = quantity supplied



Market Adjustment Process

6-steps (with Graphical Analysis):

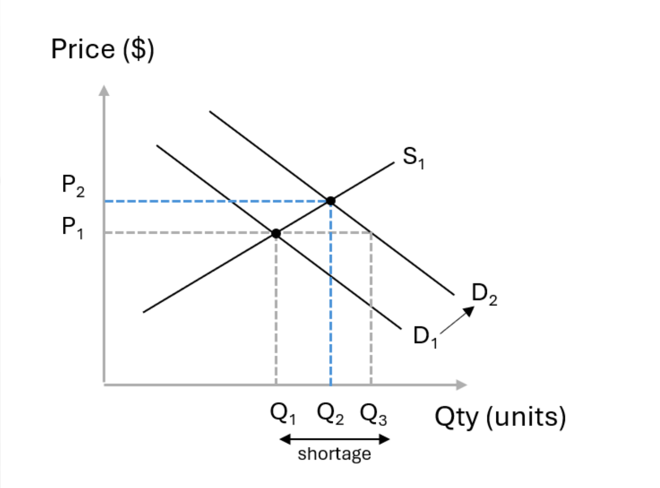
1. [Rise/Fall] of [Demand/Supply] is represented by a [rightward/leftwards] shift of [Demand/Supply] curve
2. At the original market equilibrium price, Quantity Demanded > Quantity Supplied / Quantity Supplied > Quantity Demanded
3. Shortage / Surplus
4. (Upward/Downward) pressure on price to (rise/fall)
5. Change in Q_D and Q_S
6. New market Equilibrium where (shortage/surplus) is eliminated

Market Adjustment: Shortage

Example 1: Explain how changing preferences towards healthier living have led to an increase in the equilibrium quantity of organic foods?

As healthier living trends occur, consumers are willing to pay more for organic foods.

1. Seen in the graph, this [**increase**] in [**Demand**] for organic food is represented by a [**rightward**] shift of [**Demand**] curve from D_1 to D_2
2. At the original market equilibrium price of P_1, [**Quantity Demanded at Q_3 is greater than Quantity Supplied at Q_1**]
3. This will result in a [**Shortage**] of Q_3-Q_1
4. Leading to a [**Upward**] pressure on price to [**rise**]
5. As price [**rises**], Q_D falls as consumers consume less at a higher price; Meanwhile the rise in [**price**] leads to a rise in Q_S as producers are willing to produce more of a good at a higher price.
6. Hence, Q_D falls and Q_S rises until Q_D meets Q_S at the new market equilibrium price (P_2) and quantity (Q_2) and the shortage is eliminated.



Market Adjustment: Surplus

<u>Practice 2</u>: Explain why a surplus of canned beans production might exist with the rise in globalisation. [10m]

<u>Essay Structure</u>

Paragraph 1: **Introduction**
- Explain the price mechanism process

Paragraph 2: **Supply factor**
- Technological advancements

Paragraph 3: **Demand factor**
- Rising global incomes (Inferior Good)

To score 8-10m, answers have to be illustrated with <u>diagrams</u> and <u>examples</u> (link back to question)!

Thank You

In the next part, we will be going through Elasticities