

2.1 Demand



Learning objectives

2.1 Demand	Depth	Diagrams & calculations
The law of demand - relationship between price and quantity demanded	AO2	
 Assumptions underlying the law of demand (HL only) The income and substitution effects The law of diminishing marginal utility 		
Demand curve	AO4	Diagram: downward-sloping demand curve
Relationship between an individual consumer's demand and market demand	AO2	



Learning objectives

2.1 Demand	Depth	Diagrams & calculations
Non-price determinants of demand	AO2	
Income		
Tastes and preferences		
Future price expectations		
 Price of related goods (in the cases of substitutes and 		
complements)		
Number of consumers		
Movements along the demand curve and shifts of the demand curve		Diagram: movements along
	AO4	the demand curve and shifts
		of the demand curve



Microeconomics is concerned with the behaviour of consumers and producers. Together, they form a market where goods and services are bought and sold. For example, Amazon is a market that consists of buyers and sellers that trade a variety of products such as electronics and books.



150 million Amazon

Prime subscribers



2.5 million sellers listing products



Over 4,000 transactions per minute





Real world example

How might the Black Friday sales be related to the idea of **demand**?





What is demand?

Demand is concerned with the behaviour of consumers and refers to the quantities of a product that consumers are willing and able to buy at various prices, over a period of time, ceteris paribus.



An individual consumer's demand for a product can be represented in different ways. A

demand schedule shows a table of data for the variables of price and quantity demanded.

Price of candy (\$ per piece)	Quantity demanded of candy (pieces)
5	0
4	2
3	4
2	6
1	8



Individual demand – demand curve

We can also represent demand by plotting the data from the demand schedule on a graph with price on the vertical axis and quantity on the horizontal axis. This is known as a **demand curve**.



Individual demand and market demand

Let's assume a total of four individual consumers of candy in a market. We can construct the **market demand** for candy by adding all consumers' quantity demanded at each price.

Price of candy (\$)	Charlie's quantity demanded	Robert's quantity demanded	Stan's quantity demanded	Vivien's quantity demanded	Market quantity demanded
5	2	3	2	1	8
4	4	5	3	3	15
3	6	7	4	5	22
2	8	9	5	7	29
1	10	11	6	9	36

Individual demand and market demand

The **market demand** is therefore the sum of all individual consumer demand.





Real world example – Research activity

Stockx.com is an online marketplace where buyers and sellers trade sneakers (trainers). We can use real market data to construct a demand schedule and demand curve for any sneaker.





Real world example – Research activity

Step 1: Visit stockx.com/sneakers and select a sneaker of your choice.



Real world example – research activity

Step 2: For your chosen sneaker, select "View Bids". This shows the various prices at which potential buyers are willing and able to purchase the sneaker. Using this data, create a demand schedule for the highest 5 price points. You will need to calculate the cumulative quantity demanded as the price decreases. For example:

Bid Price	Quantity	Price (\$)	Quantity demanded
\$490	1	420	5
\$460	1	425	4
\$440	1	440	3
\$425	1	460	2
\$420	1	490	1



Real world example – research activity

Step 3: Using your demand schedule, create a demand curve. Label your axis with the appropriate titles and units.

Step 4: Describe the relationship between price and quantity demanded of your chosen sneaker.



As the price increases, quantity demanded decreases. This is the **law** of demand.



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The **law of demand** states that there is a negative relationship between price and quantity demanded. This means as the price of a product increases, quantity demanded decreases, and vice versa.



What might explain this relationship?





The income effect

As the price of a good decreases, consumer purchasing power increases. Consumers are more able to afford the product at lower prices. With greater purchasing power, quantity demanded increases.





Assume Coca-Cola and Pepsi are both are sold at \$1.20 per can. How might consumer behaviour change if the price of Pepsi falls to \$0.90 per can?







The substitution effect

As the price of Pepsi decreases, some consumers may switch from Coca-Cola since the two goods are substitutes. This increases the willingness and ability for consumers to purchase Pepsi at the lower price



The law of diminishing marginal utility

Imagine you are having your favourite pizza for dinner. How does your enjoyment level change after each slice?

1st slice: I'm starving, this is the best thing that I've ever tasted!2nd slice: This is so good!

3rd slice: I'm starting to get full, I'm not sure I can eat much more.

4th slice: I feel bloated, and regret eating that last slice.





The law of diminishing marginal utility

As you consume each additional unit of the same good and/or service, the enjoyment and satisfaction you have decreases. As a result, you become less willing and able to purchase each additional unit.

Investopedia explains





Demand is concerned with the behaviour of consumers and refers to the quantities of a product that consumers are *willing* and *able* to buy at various prices, over a period of time, **ceteris paribus**.



What other factors are we assuming remain constant?

In other words, what other factors aside from price can influence demand?







Brainstorm: aside from price, what other factors might affect the market demand for Netflix subscriptions?



Non-price determinants of demand are factors that may influence the willingness and ability of

consumers to purchase a good and/or service. This includes but is not limited to:





Income

Changes in consumer income may affect demand for products differently depending on the type of good.

Normal goods see an increase in demand as consumer incomes rise, and vice versa. Examples include everyday necessities such as regular food items and clothing, and luxury products such as sports cars and designer wear.

Inferior goods see a decrease in demand as consumer incomes rise, and vice versa. For example, consumers may switch their demand of secondhand clothes and canned foods to new clothes and fresh foods when incomes rise.



Tastes and preferences

Changes in consumer tastes and preferences may be caused by social and cultural changes.

For example, many consumers increasingly value sustainability. This may increase the demand for electric vehicles and decrease the demand for petrol vehicles. Similarly, there may be an increase in demand for vegan products and a decrease in demand for animal products.



Future price expectations

If consumers expect the price of a good to rise in the future, some may purchase the good at the current time period at a comparatively lower price resulting in an increase in current demand.

Alternatively, if consumers expect the price of a product to fall in the future, some may delay their purchase until later, resulting in a decrease in current demand.







Future price expectations

Future price expectations may be derived from different events such as:

- The reduced price of smartphones after the launch of a new model.
- Anticipated seasonal sales offers from clothing retailers.
- A government announcement on an increase in indirect tax on alcoholic products to be introduced next year.





Price of related goods

Related goods experience a change in demand from a change in the price of an associated product. There are two categories of related goods:

- **Substitutes** are goods that can replace each other to some degree e.g., laptops and desktop computers. When the price of a substitute increases, demand for the original good increases, and vice versa.
- Complements are goods that are used in conjunction with another good e.g., a mouse and keyboard. When the price of a good increases, demand for the complimentary good decreases, and vice versa.





Number of consumers

The number of consumers in a market has a positive relationship with demand. For example, an increase in the number of IB schools and students will increase the demand for IB teaching and learning resources.





Real world example – case study

Article: China to surpass US as world's largest pet market

- Explain two non-price determinants of demand contributing towards the growth of the Chinese pet market.
- 2. Identify two types of businesses that stand to benefit from increased pet ownership in China.
- 3. With reference to the non-price determinants of demand, explain how the Coronavirus pandemic might affect the demand for pets in China.





Illustrating shifts in demand

An **increase** in demand is shown by an outward/rightward shift of the demand curve from D1 to D2. This indicates a greater level of quantity demanded at the same price (P1).

A decrease in demand is shown by an inward/leftward shift of the demand curve from D1 to D3. This indicates a lower level of quantity demanded at the same price (P1).



Movements vs shifts

Movements along the demand curve are due to changes in price, resulting in *changes in quantity demanded*.

Shifts in the demand curve are due to changes in nonprice determinants resulting in *changes in demand*.





Test your knowledge on this unit: <u>Kahoot!</u>

