AS Markets & Market Systems

Theory of Demand

We now consider the basic theories of how the market mechanism works. In this chapter we consider the economics of the law of demand. This is important background to understanding the determination of prices in competitive markets.

Demand

Demand is defined as the quantity of a good or service that consumers are **willing and able to buy** at a **given price in a given time period**. Each of us has an **individual demand** for particular goods and services and the level of demand at each market price reflects the **value** that consumers place on a product and their **expected satisfaction** gained from purchase and consumption.

Market demand

Market demand is the **sum of the individual demand for a product from each consumer in the market.** If more people enter the market and they have the ability to pay for items on sale, then demand at each price level will rise.

Effective demand and willingness to pay

Demand in economics must be **effective** which means that only when a consumers' desire to buy a product is backed up by **an ability to pay for it** does demand actually have an effect on the market. Consumers must have sufficient **purchasing power** to have any effect on the allocation of scarce resources. For example, what price are you willing to pay to view a world championship boxing event and how much are you prepared to spend to watch Premiership soccer on a pay-per-view basis? Would you be willing and able to pay to watch Elton John perform live through a subscription channel?

Auctions of film posters

Classic film posters are fetching thousands of pounds as more and more private collectors vie for a piece of cinema history. The prices that collectors are prepared to pay for film posters continues to rise, some of the buyers are hoping for a financial return whereas others are just willing and able to pay for the satisfaction that comes from owning a small slice of cinema memorabilia.

Rockonomics - rising ticket prices for pop concerts

Tickets for the most popular rock and pop concerts keep getting more expensive but consumers seem happy and able to pay for them judging from the number of sell-out gigs in London this spring. The price of a seat for to see Madonna's "Confessions on a Dancefloor" tour ranges from £80 to £160, with an additional £13 booking fee. A ticket to see Red Hot Chili Peppers will set you back £40 and the chance to see Bruce Springsteen at the Hammersmith Apollo is priced at just under £50 for a standard ticket. Ticket prices have been rising much faster than the overall rate of inflation which has led to a large rise in the real price of seeing your favourite pop star on stage.

Latent Demand

Latent demand is probably best described as the potential demand for a product. It exists when there is willingness to buy among people for a good or service, but where consumers lack the purchasing power to be able to afford the product. Latent demand is affected by **advertising** - where the producer is seeking to influence consumer tastes and preferences.

The concept of derived demand

The demand for a product X might be strongly linked to the demand for a related product Y - giving rise to the idea of a **derived demand.**

For example, the demand for steel is strongly linked to the demand for new vehicles and other manufactured products, so that when an economy goes into a downturn or recession, so we would expect the demand for steel to decline likewise. The major producer of steel in the UK is Corus. They produce for a wide range of different industries; from agriculture, aerospace and construction industries to consumer goods producers, packing and the transport sector. Steel is a **cyclical industry** which means that the total market demand for steel is affected by changes in the economic cycle and also by fluctuations in the exchange rate.

The demand for new bricks is derived from the demand for the final output of the construction industry- when there is a boom in the building industry, so the market demand for bricks will increase

The Law of Demand

Other factors remaining constant (ceteris paribus) there is an **inverse relationship between the price of a good and demand.**

- As prices fall, we see an **expansion of demand**
- If price rises, there will be a **contraction of demand.**

The ceteris paribus assumption

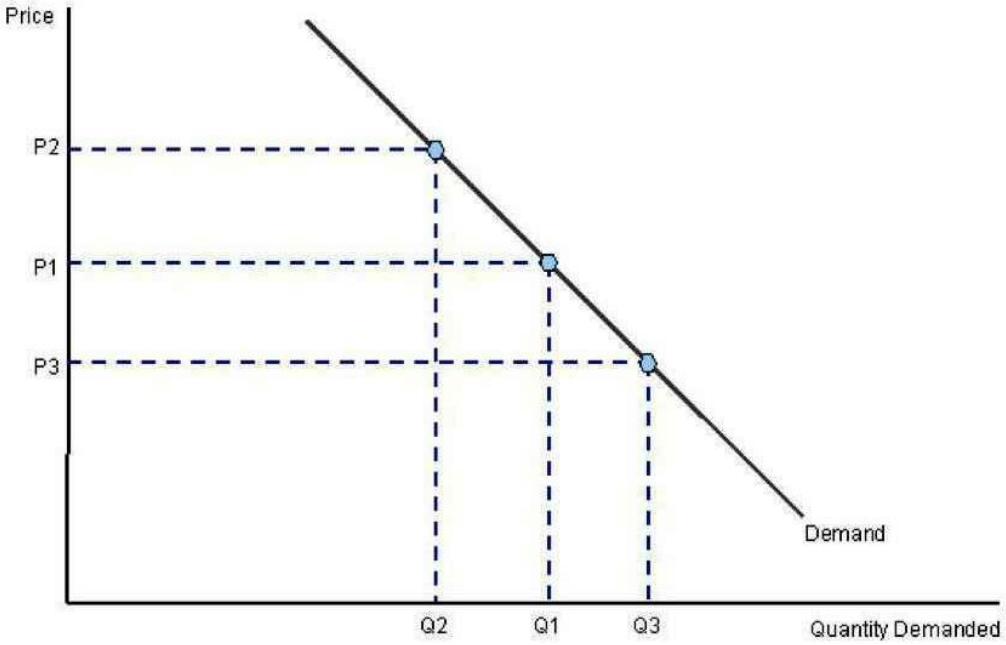
Understanding **ceteris paribus** is the key to understanding much of microeconomics. Many factors can be said to affect demand. Economists assume all factors are held constant (ie do not change) except one - the price of the product itself. A change in a factor being held constant invalidates the ceteris paribus assumption

The Demand Curve

A demand curve shows the relationship between the price of an item and the quantity demanded over a period of time. There are two reasons why more is demanded as price falls:

- **The Income Effect:** There is an income effect when the price of a good falls because the consumer can maintain current consumption for less expenditure. Provided that the good is normal, some of the resulting increase in real income is used by consumers to buy more of this product.
- **The Substitution Effect:** There is also a substitution effect when the price of a good falls because the product is now relatively cheaper than an alternative item and so some consumers switch their spending from the good in competitive demand to this product.

Demand – the amount consumers desire to purchase at various alternative prices
At higher prices, consumers generally willing to purchase less than at lower prices
At lower prices there is a financial incentive to demand more of a good or service



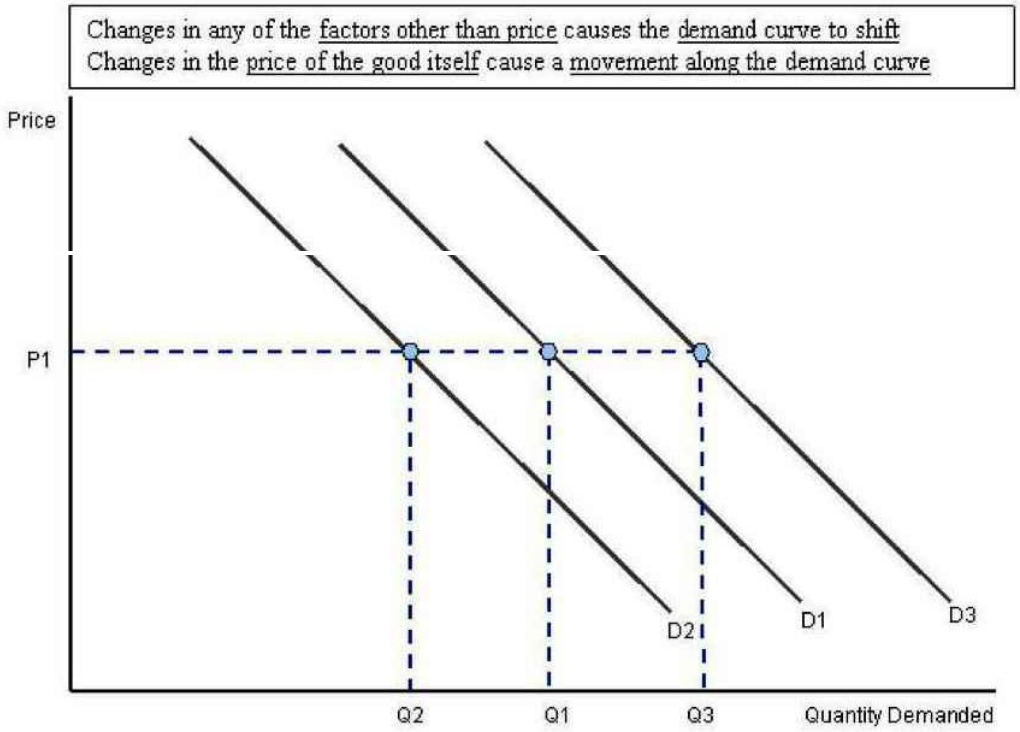
The demand curve is normally drawn in textbooks as a straight line suggesting a linear relationship between price and demand but in reality, the demand curve will be non-linear! No business has a perfect idea of what the demand curve for a particular product looks like, they use real-time evidence from markets to estimate the demand conditions and they accumulated experience of market conditions gives them an advantage in constructing demand-price relationships.

A change in the price of a good or service causes a movement along the demand curve. A fall in the price of a good causes an expansion of demand; a rise in price causes a contraction of demand. Many other factors can affect total demand - when these change, the demand curve can shift. This is explained below.

Shifts in the Demand Curve Caused by Changes in the Conditions of Demand

There are two possibilities: either the demand curve shifts to the right or it shifts to the left.
In the diagram below we see two shifts in the demand curve:

- D1 - D3 would be an example of an outward shift of the demand curve (or an increase in demand). When this happens, more is demanded at each price.
- A movement from D1 - D2 would be termed an inward shift of the demand curve (or decrease in demand). When this happens, less is demanded at each price.



The conditions of demand

The conditions of demand for a product in a market can be summarised as follows:

D = f (Pn, Pn...Pn-1, Y, T, P, E)

Where:
Pn = Price of the good itself
Pn...Pn-1 = Prices of other goods - e.g. prices of Substitutes and Complements
Y = Consumer incomes - including both the level and distribution of income
T = Tastes and preferences of consumers
P = The level and age-structure of the population
E = Price expectations of consumers for future time periods

Changing prices of a substitute good

Substitutes are goods in **competitive demand** and act as **replacements** for another product.

For example, a rise in the price of Esso petrol should cause a substitution effect away from Esso towards competing brands. A fall in the monthly rental charges of cable companies or Vodafone mobile phones might cause a decrease in the demand for British Telecom services. Consumers will tend over time to switch to the cheaper brand or service provider. When it is easy and cheap to switch, then consumer demand will be sensitive to price changes.

Much depends on whether consumers have sufficient **information about prices** for different goods and services. One might expect that a fall in the charges from one car rental firm such as Budget might affect the demand for car rentals from Avis Hertz or Easycar. But searching for price information to get the best deal in the market can be time consuming and always involves an opportunity cost. The development of the internet has helped to increase **price transparency** thereby making it easier for consumers to compare relative prices in markets.

Changing price of a complement

Two complements are said to be in **joint demand**. Examples include: fish and chips, DVD players and DVDs, iron ore and steel.
A rise in the price of a complement to Good X should cause a fall in demand for X. For example an increase in the cost of flights from London Heathrow to New York would cause a decrease in the demand for hotel rooms in New York and also a fall in the demand for taxi services both in London and New York.
A fall in the price of a complement to Good Y should cause an increase in demand for Good Y. For example a reduction in the market price of computers should lead to an increase in the demand for printers, scanners and software applications.

Change in the income of consumers

Most of the things we buy are **normal goods**. When an individual's income goes up, their ability to

purchase goods and services increases, and this causes an outward shift in the demand curve. When incomes fall there will be a decrease in the demand for most goods.

Change in tastes and preferences

Changing tastes and preferences can have a huge effect on demand. Persuasive advertising is designed to cause a change in tastes and preferences and thereby create an outward shift in demand. A good example of this is the recent surge in sales of smoothies and other fruit juice drinks.

The market for health fruit and vegetable drinks has grown rapidly in recent years following a change in consumer preferences. How much are we influenced by the effects of advertising?

The market demand for smoothies

The UK's growing thirst for healthy eating and fears about the longer term health effects of the consumption of fast food has meant that the demand for smoothies and other fresh fruit drinks has expanded rapidly in recent years. **Innocent**, the leading brand in supermarkets, estimates that the market could be worth £170m in 2007. More and more retail outlets such as Crussh are appearing on the high streets, and demand is rising in school canteens and workplaces. Innocent has seen its turnover expand to £37m in the past six years and has over 50 per cent of the UK market. It sells 1m smoothies a week, compared with 20 on its first day of operation in 1999. Some stockmarket experts are forecasting that a fruit juice manufacturer could eventually enter the FTSE-100 list of top stockmarket businesses.
Source: Adapted from news reports, June 2006 and the Innocent web site

Discretionary income

Discretionary income is disposable income less essential payments like electricity & gas and, especially, mortgage repayments. An increase in interest rates often means an increase in monthly mortgage payments reducing demand. And during 2005 and 2006 we have seen a sharp rise in the cost of utility bills with a series of hikes in the prices of gas and electricity. This has eaten into the discretionary incomes of millions of households across the UK. The discretionary incomes of people suffering from **fuel poverty** have become a major current issue.

Interest rates and demand

Many products are bought on credit using borrowed money, thus the demand for them may be sensitive to the **rate of interest** charged by the lender. Therefore if the **Bank of England** decides to raise interest rates - the demand for many goods and services may fall. Examples of **"interest sensitive"** products include household appliances, electronic goods, new furniture and motor vehicles. The demand for housing is affected by changes in mortgage interest rates.

Exceptions to the law of demand

Does the demand for a product always vary inversely with the price? There are two possible reasons why more might be demanded even when the price of a good or service is increasing. We consider these briefly - ostentatious consumption and the effects of speculative demand.

(a) Ostentatious consumption

Some goods are **luxurious items** where satisfaction comes from knowing both the price of the good and being able to flaunt consumption of it to other people! The demand for the product is a direct function of its price.

A higher price may also be regarded as a **reflection of product quality** and some consumers are prepared to pay this for the **"snob value effect"**.

Examples might include perfumes, designer clothes, and top of the range cars. Consider the case of VI which is considered to be the most exclusive perfume in the world. Only 475 bottles have been produced and bottles have been selling for £47,500 each - a classic case of paying through the nose for an exclusive good.

Goods of ostentatious consumption are known as **Veblen Goods** and they have a **high-income elasticity of demand.** That is, demand rises more than proportionately to an increase in income.

(b) Speculative Demand

The demand for a product can also be affected by **speculative demand**. Here, potential buyers are

interested not just in the satisfaction they may get from consuming the product, but also the **potential rise in market price** leading to a **capital gain or profit.** When prices are rising, speculative demand may grow, adding to the upward pressure on prices. The speculative demand for housing and for shares might come into this category and we have also seen, in the last few years, strong speculative demand for many of the world's essential commodities.

Speculation drives the prices of commodities to fresh highs

World commodity prices have reached new highs this year helped by an increase in the rate of economic growth in the global economy. Among the metals that have achieved record price levels are copper, zinc, gold and platinum; prompting sceptics to question how much longer prices can continue rising. Many market experts believe that the demand for commodities has been spurred by heavy speculator activity. For example, pension funds and hedge funds have been investing in commodity mutual funds over recent years leading to increased demand for precious metals. Prices have risen quickly because commodity producers are unable to raise output sufficiently to meet unexpectedly strong demand.
Source: Adapted from news reports, July 2006

The non-linear demand curve and the idea of price points

So far in our introductory theory of demand, we have drawn the demand curve for a product to be linear (a straight line). In many real world markets this assumption of a linear relationship between price and quantity demanded is not realistic. Many price-demand relationships are non-linear and an example of this is provided in the chart above, used to illustrate the idea of **price-points.**

Price points are points on the demand curve where demand is relatively high, but where a small change in price may cause a sizeable contraction in demand leading to a loss of total revenue for the producer.

Price points can be justified in a number of ways:

- A price rise at the price point may make the product more expensive than a close substitute causing consumers to change their preferences
- Customers may have become used to paying a certain price for a type of product and if they see a further price rise, this may cause them to revalue how much satisfaction they get from buying and consuming something, leading to a decline in demand
- There may be psychological effects at work, supermarkets for example know the importance of avoiding price points - £2.99 somehow seems cheaper than £3.00 despite the tiny price difference

For AS level economics, you will be expected to draw and use linear demand curves in your basic analysis. But it is important to realise that in the real world of business, price-demand relationships can be complex and often a business does not have enough information about the behaviour of consumers for them to actually construct an accurate demand curve. As with many aspects of economic theory, we are constructing curves to illustrate economic relationships. They are simplifications of reality.

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