# Price Determination via the Price Market Mechanism

# Presentation 1 – Intro to the Price Market Mechanism

Take notes. Your notes should cover the following questions:

* What is meant by the Price market mechanism?
* What is the market equilibrium? How can we show it?
* What are the market forces?
* What are the impacts of changes in demand and supply on the market equilibrium?

# Emirates StadiumArticle Task: Premier League ticket prices in 2018-19 - How much does it cost to watch each team play?

**Instructions:**

* *Read highlight and annotate the article*
* *Answer the key question*

**Article**

*Arsenal sell the most expensive seat in the English top flight, while Huddersfield Town have earned plaudits for the affordability of their games*

It can cost anything from £9 to £97 for an adult to watch a Premier League match during the 2018-19 season.

Arsenal are once again offering the most expensive admission in the English top flight this term, with their £97 ticket the top price for games they class as 'category A' against their most important opponents. Liverpool, on the other hand, boast the cheapest ticket in the Premier League after freezing their prices for the third year in a row.

It is possible to get into a game at Anfield for just £9 at the top of their new main stand, but it should be noted that those tickets are in limited supply and the next-cheapest ticket they offer is priced at £37 - £10 more than Arsenal's lowest. A ticket in the famous Anfield Kop, meanwhile, will set spectators back £43 at the most and £37 at the very least.

Manchester United's highest price for a single ticket is the lowest of any of the 'big six' clubs, but they are also the only club in the league to only sell Premier League tickets to fans who have paid to join their membership scheme, which starts at £20 a season.

Ticket prices to see the Red Devils at Old Trafford have been frozen for 2018-19, which means they have now remained unchanged for seven seasons in succession.

Tottenham, who are still playing at Wembley this season while the finishing touches are put on their new stadium, are the only other team in the division to sell a ticket for more than £90. Spurs hope to move into the new 62,000-seater Tottenham Hotspur Stadium before the end of 2018 and are charging the highest prices for season tickets, with the most expensive end of the scale costing £2,200.

The lowest upper limit for a single adult ticket is at Huddersfield Town, who sell tickets for the same price of £30 every week no matter the opponent or the seat.

Despite an increase from last season, Huddersfield also retain the prize for the cheapest season ticket having given fans the chance to renew their seats for £249 across the board.

Everton have the most expensive lower limit on an ordinary adult ticket at £38, which is for the family enclosure, though it is notable that there is a differential of just £11 between that and the most expensive seats in Goodison Park.

A majority of clubs now categorise matches depending on the opponent and increase and decrease prices accordingly.

Huddersfield are the only club in the league who do not follow that model or vary the price of tickets depending on their location within the stadium.

There is a gulf of £70 between the cheapest Arsenal ticket in their lowest category and the most expensive in their highest, while Tottenham's stands at £65 and West Ham's at £55.

Joining Huddersfield at the lower end of the scale are newly promoted Wolves, whose prices range from £22 to £40, and Burnley, who do not have categories and sell tickets for between £30 and £40.

**Key Question**

# Using your understanding of equilibrium price and market forces, explain why ticket prices vary so much?

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# Task: Equilibrium and the Changing Conditions of Supply & Demand

**Instructions:**

* *Using the below diagram, determine the new equilibrium point for the product and the changes given in the table:*

**D2**

**S1**

**P**

b

**S**

g

f

**S2**

**a**

c

e

h

i

**D**

d

**D1**

**Q**

|  |  |  |
| --- | --- | --- |
| **Product** | **Changes in Conditions** | **New Equilibrium Point** |
| Holidays to Miami | A successful advertising campaign by the Miami Tourist Board |  |
| Beer | An increase in the tax on beer |  |
| Spam | New technology reduces the cost of canning and there is an increase in consumer incomes |  |
| Tea | A severe frost in Brazil which damages the coffee crop |  |
| DVDs | A fall in the price of DVD players and there is an influx of trained retail workers from the EU |  |
| Hides | A positive health report on beef and leather jackets become a fashionable item of clothing |  |
| Bus travel | An increase in the congestion charge and a Gvt subsidy for bus operators |  |
| Gas | A burst pipeline in the Middle East and an unusually cold winter |  |
| Fish | A new Gvt subsidy is given to poultry farmers and the Gvt decides to impose VAT on fish |  |
| Houses | A fall in interest rates and stronger planning restrictions imposed by local authorities |  |

# Task: Test yourself

**Instructions:**

* *Using a diagram, explain the impact in the market of the following:*

1. Assuming no change in supply, explain the impact in a market of an increase in demand.

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2. Assuming no change in demand, explain the impact in a market of a decrease in supply.

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3. Use a diagram to explain the impact in a market of a simultaneous increase in demand and supply.

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4. Use a diagram to explain the impact in a market of a simultaneous decrease in demand and increase in supply.

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# Presentation 2 – Functions of the Price Market Mechanism

Take notes. Your notes should cover the following questions:

* What is meant by the rationing function?
* What is meant by the incentive function?
* What is meant by the signal function?
* How does the market allocate resources effectively?

# MCQs

**Instructions:**

Answer the below MCQs to test your understanding of the price mechanism

1. One function of the price mechanism is to:

A Encourage businesses to exit a market as price of the goods produced increases

B Eliminate a surplus of a good by allowing the market price to fall

C Encourage government intervention to set production targets

D Maintain price stability

[1]

1. With reference to the functions of the price mechanism in a free market economy, which of the following statements is true?

A Falling prices will encourage businesses to enter a market

B The price mechanism is used by a government to create production targets

C Excess supply of a good can be eliminated by allowing its price to rise

D The price mechanism acts as a rationing device

[1]

1. One function of the price mechanism is to:

A Eliminate surpluses of a good by allowing the market price to rise

B Encourage government intervention to reduce inequality in the distribution of income

C Signal changes in consumer demand for a good to producers

D Maintain price stability

[1]

# Extension Article Task: The Cobweb Model

**Article:**

*Illustrating the effects of time lags in production on the market forces*

When goods take a time to produce, there will be a time lag between a change in production decisions and a change in the actual supply coming on to the market. Thus the actual supply at one time will depend on that planned at a previous time. For example, the quantity that farmers harvest now will depend on what they planted earlier.

Since supply decisions depend on price, supply at any time will depend on price at a previous time.

These time lags can lead to price fluctuations. This is illustrated in a cobweb diagram: see below. To keep the analysis as simple as possible, we make two important assumptions:

* Firms’ production plans, once made, are fully carried out; they end up supplying precisely the amount they had planned to.
* There is an initial disequilibrium in the market: either demand or supply has shifted. The result is that price is now above the intersection of the new demand and supply curves. 

The diagrams show just the new demand and supply curves. Note that the supply curve is the planned supply curve. The actual supply coming on to the market will be the amount planned in the previous time period.

Assume that the initial (disequilibrium) price is P1. At P1 producers plan to supply Q1. Thus in the next time period Q1 is actually supplied. But in order for Q1 to be sold, price falls to P2. Producers, seeing that price has fallen to P2, now only plan to supply Q2 for the next time period. So in the next time period Q2 duly comes on to the market. Price now has to rise to P3 to clear the market.

This process continues with both price and quantity oscillating.

Whether these oscillations get smaller or larger depends on the shape of the demand and supply curves. If the supply curve is steeper than the demand curve, as in Diagram (a), the oscillations will be damped: they will get smaller over time. This is called a convergent cobweb. If the demand curve is steeper than the supply curve, as in Diagram (b), however, the oscillations will be explosive: they will get larger over time. This is called a divergent cobweb.

In practice, cobwebs will not be as clear cut as in the diagram for a number of reasons:

* Producers may anticipate price fluctuations and not simply rely on current prices.
* Demand and supply curves may shift in the meantime.
* There may be a lag in demand adjustment as well as in supply adjustment.
* Plans may not be fulfilled. For example, farmers may experience a better or worse harvest than anticipated.
* Producers may use stocks. They may draw on stocks when prices are high and build stocks when prices are low. Thus supply released on to the market will not fluctuate so much. This in turn will reduce price fluctuations.

Nevertheless cobweb effects have been observed in various markets. Historically, ‘hog’ cycles and potato cycles have been identified which show clear fluctuations in pig meat and potato prices.

**Questions:**

1. How can the ideas addressed here be reconciled with the market forces of excess supply and excess demand?

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2. What shaped demand and supply curves would give a ‘stable’ cobweb: i.e. one where price fluctuations persist with the same magnitude? Include a diagram in your answer.

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3. Would speculation help to stabilise the price fluctuations associated with the cobweb effect? How would speculation work here?

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# Assignment

**Short-answer questions (Section A)**

1. The diagram shows a competitive market for maize.

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Assuming the current price is P1, the most likely outcome is:

A Quantity supplied will fall

B Demand curve will shift to the left

C Price will rise

D Quantities supplied and demanded will remain unchanged

[1]

1. The table shows the demand and supply schedules for packets of shortbread biscuits.

|  |  |  |  |
| --- | --- | --- | --- |
| Price per packet | Quantity of packets demanded per month (000) | Quantity of packets supplied per month (000) | New quantity supplied per month (000) |
| £2.00 | 200 | 160 |  |
| £2.10 | 180 | 180 |  |
| £2.20 | 160 | 200 |  |
| £2.30 | 140 | 220 |  |

As a result of an increase in the baking costs for producing packets of shortbread biscuits, supply decreases by 40,000 packets at all prices.

Calculate the change in equilibrium price given the increase in baking costs. You may use the last column for your workings

[4]

1. Which of the following factors is most likely to cause the price of gold to fall without a shift in the demand curve?

A An increase in national income

B A decrease in the price of silver

C An increase in the wages of gold miners

D A decrease in the cost of machinery used in gold mining

[1]

1. Good X and good Y are complementary goods. The diagram below shows an increase in supply of good X.



Qe

Pe

D

S

Quantity of Y

Price of Y

**Market for Y**

Illustrate the impact of an increase in the supply of good X on the market for good Y.

[1]

1. The diagram shows the demand and supply of rugby balls in the United Kingdom. Following the publicity generated by the Rugby World Cup, the number of people playing rugby has increased. At the same time production of rugby balls has switched to a low-wage economy.

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If the initial point is X, which of the following points A, B C, D shows the likely new equilibrium point for rugby balls?

[1]

1. The diagram relates to the market for beef, a substitute for chicken. The initial equilibrium position is indicated by point X.

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An outbreak of Bird Flu results in the demand for chicken falling and, at the same time, the ban on the sales of beef older than three years is removed. What will be the new equilibrium point (A, B, C or D)?

[1]

ensuring that the economy always operates at the full capacity

1. The diagram shows the supply and demand for bus travel in Harchester.

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In this town, bus travel is an inferior good. Real incomes increase and, at the same, there is a significant increase in fuel costs for operating buses. If the initial equilibrium position is indicated by point X, what will be the new equilibrium position, A, B, C or D?

[1]

1. The diagram relates to the market for vitamin pills. The initial equilibrium position is indicated by point X.

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What will be the new equilibrium position, A, B, C or D, following a government medical report that vitamin pills could endanger health, and, at the same time, a major pharmaceutical company entering the market with a new range of vitamin pills?

[1]

**Data response (Section B)**

**The price of cotton**

**Figure 1: Cotton prices 2005-2011 (US cents per pound in weight)**

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**Extract 1: Rising cotton prices**

The price of cotton more than doubled in 2010 after crops from China and Pakistan were hit by floods. This was made worse by the Indian Government’s ban on cotton exports. World supply of cotton fell from 107 million bales in 2009 to 101 million bales in 2010. A bale of cotton weighs 500 pounds and can make 1200 t-shirts. Stocks of cotton are at their lowest level for five years. At the same time, speculators have bought up large quantities of cotton in the hope of making profits.

Farmers have responded to rising prices by devoting more land to cotton. In the right conditions, cotton crops take 100 days to reach maturity. World supply is forecast to increase to 117 million bales in 2011.

Cotton is the most important textile for making clothing. However, demand for synthetic materials is increasing as manufacturers look for alternatives.

**Extract 2: The impact of rising cotton prices on clothing retail stores**

Lord Wolfson, chief executive of retail clothing store Next, warned that the soaring price of cotton could lead to clothing prices rising by almost 10% in 2011. The retailer, which has more than 500 stores and 2.6 million online and catalogue shoppers, blamed ‘what appears to be a speculative bubble’ for the expected price rises.

Lord Wolfson stated that ‘we have not seen clothing prices rise for nearly twenty years, so it’s going to be very difficult to know how consumers will respond to a price increase’. Other stores such as Debenhams and Marks & Spencer also predicted higher clothing prices in 2011. Previously, prices had been kept down by firms relocating production facilities to Asia.

Next’s share price in November 2010 was more than 20% higher than in November 2009. This reflected a successful diversification into home furnishings such as cushions, curtains and furniture. However, analyst Katharine Wynne, at Investec, cut her full-year profit forecasts for Next from £560m to £542m and cancelled her ‘buy’ recommendation on the retailer’s shares.

**Extract 3: Genetically modified (GM) cotton farming in India**

The use of genetically modified cotton seed is widespread in India. It is used to prevent disease, increase crop yields and used to kill the pink bollworm, a mite which eats cotton seed. However, in 2009, scientists found that the bollworm had developed resistance to the modified version of the seed.

Consequently, the anticipated increase in crop yields has not materialised. However, the costs to farmers of buying and using GM seeds have increased – they require more fertiliser and twice as much water compared to traditional seeds. Farmers are not allowed to harvest seeds for the next crop but are forced to buy fresh supplies from Monsanto, the producer of this GM seed. There is now a genuine fear of a lack of bio-diversity resulting from the use of GM crops.

1. With reference to Extract 1, outline why the price of cotton “more than doubled in 2010”. Use a demand and supply diagram in your answer.

[5]

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1. With reference to Extract 2, discuss the likely effects of the increase in the price of cotton on retail clothing firms such as Next.

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# Essay Plan

**Instructions:**

Use the space below to plan a 25 mark essay (x3 evaluated KAAs) for the below question:

*“If the price of a good or service rises, the demand for that product will always fall”.*

To what extent does economic analysis support this statement?

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