

Session 1 - Market Structures

Extension activities: Solutions

Question 1

Output	TC	MC	ATC	AFC	AVC	TVC
2	114	8	57	27	30	60
3	142	28	47.3	18	29.3	87.9
4	189.2	47.2	47.3	13.5	33.8	135.2
5	258	68.8	51.6	10.8	40.8	204
6	358	100	59.7	9	50.7	304

Question 2

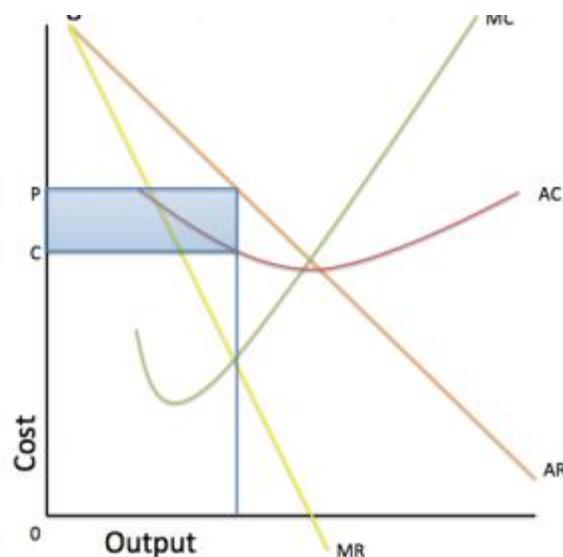
Coffee shop	Set up costs – premises and equipment Food hygiene regulations Brand loyalty to established outlets i.e. Starbucks.
Supermarket	Set up costs – premises and fittings/tills Food regulations. Advertising costs.
Pharmacy	Registration/licencing Set up costs premises/security. Competition from supermarket pharmacies.
Space tourism	High R and D costs. Health & Safety/Insurance costs. High equipment costs
Hand car washing	Cost of site. Equipment. Insurance costs.
App design	Skilled workers/designers. Crowded/competitive market. High sunk costs.

Question 3

Profit essay plan

Define profit: Accounting definition: the amount by which TR exceeds TC. Economist definition: normal profit and abnormal profit. Relate to the opportunity cost of resources.

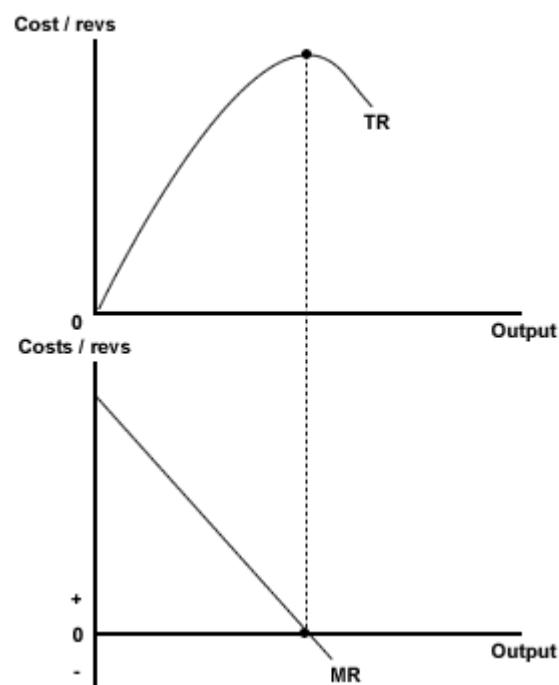
Profit max: in the short run where $MC=MR$, in the long run cost plus pricing.



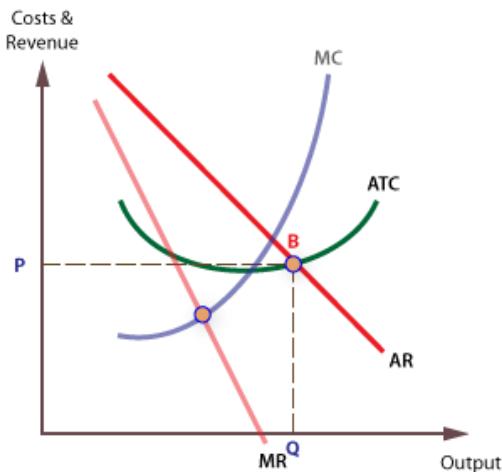
Role of profit: provides funds for investment, reward for risk taking and helps to allocate resources.

Alternative objectives

Revenue max: $MR=0$



Sales max / normal profit / limit pricing: AR=AC.



Satisficing: Firm seeks to ensure that all stakeholders are satisfied. Profit max is not the sole objective.

Do alternative objectives allow firms to maximise profit in the long run?

Sales and revenue max policies in the short run mean lower prices than profit max which could force some firms out of the market and lead to increase market share and profits in the long run.

What types of organisations might not seek to make profit?

Some organisations have social, charitable or community-based objectives.

Overall conclusion

Most firms will seek to make profit because they are owned by shareholders. However, firms look closely at their market share, product portfolios and CSR is becoming increasingly important ie reducing carbon footprints.

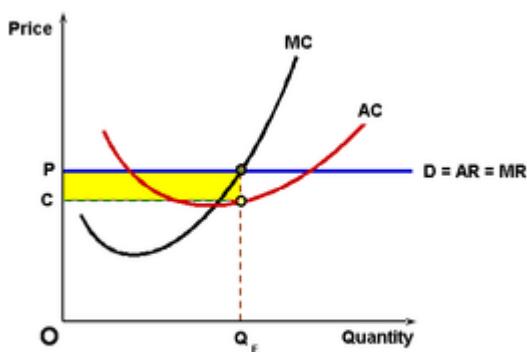
Perfect competition essay plan

What is a perfectly competitive market?: a large number of small firms, producing a homogeneous product, each firm unable to influence market price and no entry or exit barriers.

Examples: foreign currency markets, dairy farming.

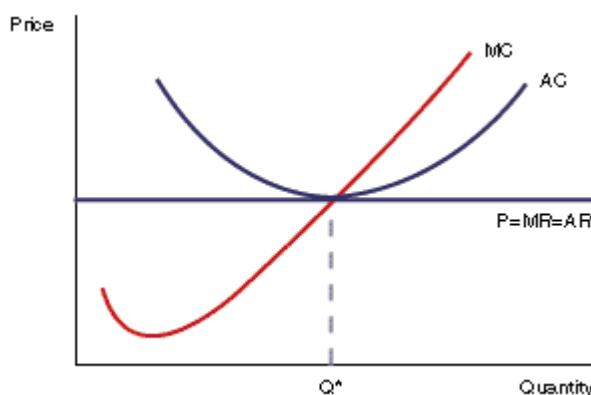
Explain what is meant by efficiency: allocative ($P=MC$), productive (output at minimum AC), dynamic (increased efficiency over time due to technological change/improved fixed and human capital)

Short run perfect competition diagram.



Abnormal profits: allocative efficiency but not productive efficiency.

Long run perfect competition diagram.



Normal profits (entry of firms will compete away any abnormal profit).

Allocative and productive efficiency but not dynamic efficiency.

Evaluation.

Although allocative and productive efficiency is achieved in the long run firms in perfect competition are unable because of their small size to benefit from economies of scale. Lack of dynamic efficiency because the lack of abnormal profits means that there are no funds for investment. Also in this market any knowledge acquired by one firm is available to all firms.

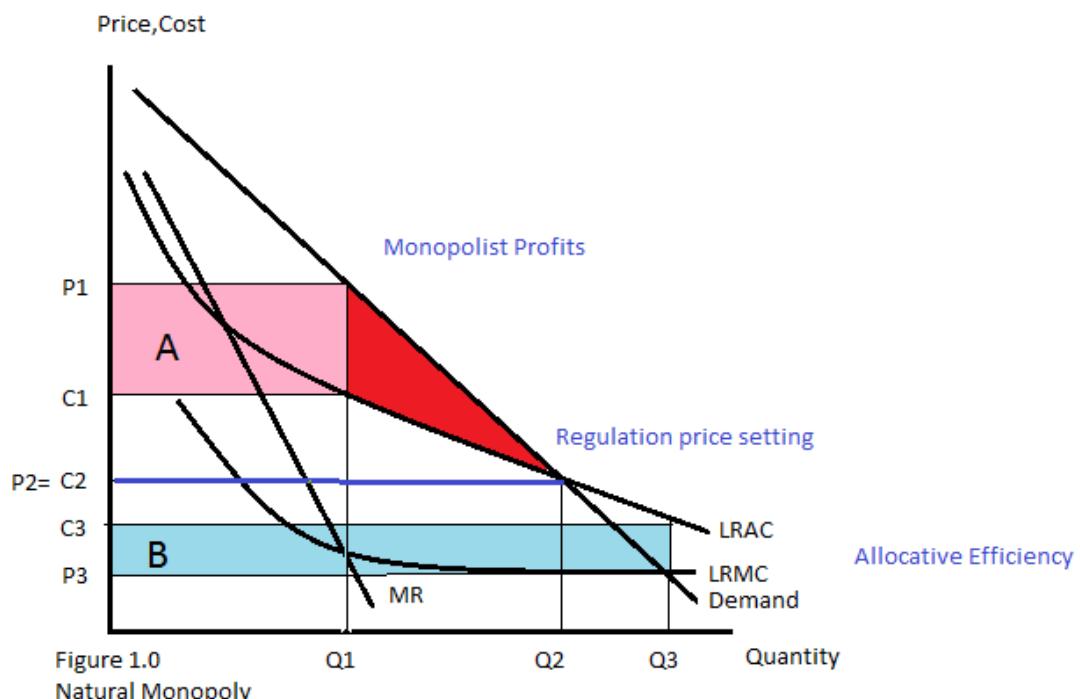
Question 4: Concentration ratios

Newspapers: 64.8%.

Broadband providers: 74%.

Supermarkets: 61.8%.

Question 5: Natural monopoly



(a) A profit maximising price and output would be P_1/Q_1 which is where $MC=MR$, with the abnormal profit shown as area A.

(b) In order to achieve allocative efficiency price would be set where $MC=AR$ at P_3 . In a natural monopoly this is likely to lead to losses shown by area B. As natural monopolies have significant market power a regulator may set the price at P_2 where $AC=AR$ giving the firm normal profits.

Question 6: Game theory

1(a) The dominant strategy is the one that is best for a firm regardless of the strategies of the other firms in the market. The Nash Equilibrium is the situation in which the firms interacting with one another each choose their best strategy given the strategies that all the other firms have chosen. In the matrix shown the dominant strategy is for both firms to set a low price and the Nash Equilibrium where both make profits of £6m.

1(b) Both firms could charge a high price and make higher profits.

1(c) A high price could be reached by both firms colluding and forming a cartel.

1(d) The formation of a cartel is unstable because firms can cheat on any agreement and there is always the threat of the cartel being discovered by the competition authorities.

1(e) The competition authorities could offer lower fines or immunity for members of a cartel who whistle blow on fellow members.

2. Both firms' dominant strategy is to produce a high level of output and the Nash Equilibrium is the top left box in the matrix.

3. Nestle will suffer a fall in profits if they raise price whatever Cadbury decide to do. Given the potential fall in profits for both firms if they raise price the dominant strategy is to leave prices unchanged and the Nash Equilibrium is the bottom right hand box in the matrix.

Question 7: Price regulation essay frame

Context:

These are made up of British Gas, EDF Energy, E.OnUK, npower, Scottish Power and SSE. They currently supply close to 95% of British households with gas and electricity.

Concentrated market:

A concentrated market exists when a few large control a large market share. The UK energy market is a concentrated market because the six largest firms account for 95% of the market. Thus the market is an oligopoly.

Pricing power:

Firms with significant market power have the ability to control price, they are price makers and may even be the price leader (see dominant firm price leadership).

Regulation:

In highly concentrated markets where there may be collusion the government may appoint a regulator, and in the energy market it is Ofgem. Regulators may engage in price capping, setting targets on quality, or be responsible for making the markets both more competitive and more contestable.

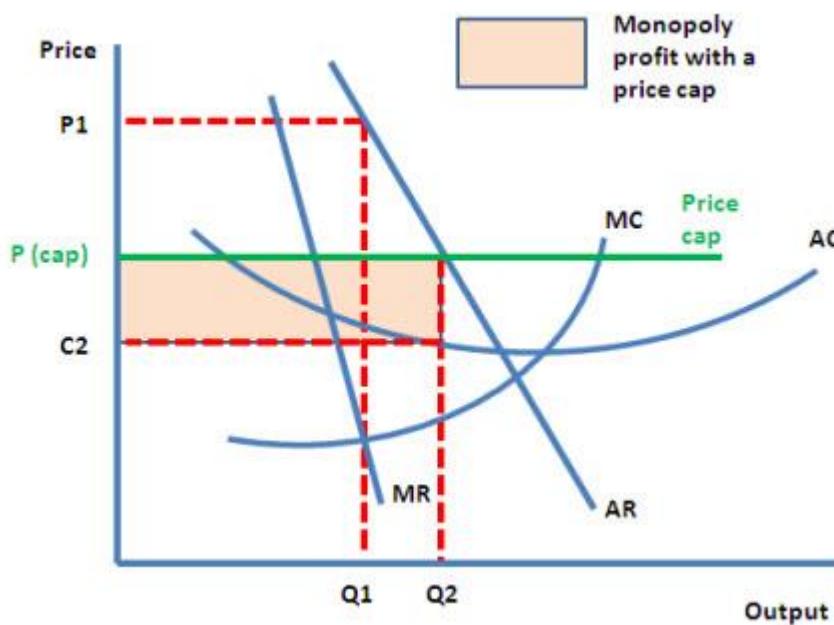
Price-capping:

Regulators may impose a price cap for possibly five years on firms in highly concentrated strategic industries such as energy, water and rail. This price cap is meant to prevent the exploitation of consumers by high prices and also to encourage firms in these markets to reduce their costs. If firms have their prices controlled they will have to attack their cost base to maintain or increase profits.

Analysis:

How price capping works:

The most common form of price-capping used in the UK has been $RPI - X$ where RPI represents the retail price index used to calculate the inflation rate. The value of X is calculated by the regulator as the extent to which the regulated firm has scope to reduce its own costs. It probably is a measure of the X-inefficiency currently being carried by the firm which it will do little to reduce unless forced to do so. For example if RPI inflation is 5% and the firm is given an X factor of 3% then it will only be allowed to raise its prices by 2%.



In the diagram above the monopolist would set the price at P_1 without a price cap set by the regulator. If the regulator sets the price at $P(\text{cap})$ the profit made by the monopolist falls to the shaded area.

Advantages to consumers of freezing energy prices:

Energy is an essential and will have a price inelastic demand and thus price-capping prevents the exploitation of consumers by high prices which reduces their consumer surplus.

High energy prices affect the low income households most because they spend a higher proportion of their income on energy than those on a high income.

The UK energy market is arguably dysfunctional and pricing opaque. There is also the argument that there has been tacit collusion between the Big Six.

Disadvantages to consumers of freezing energy prices:

An energy price freeze was announced in advance by the Labour Party in 2013 as a 2015 general election manifesto commitment. Thus it gave the energy companies so much advanced notice that they could have increased their bills as 2015 drew near in order to recoup the costs of the forthcoming price freeze. If governments are going to impose an energy freeze then they need to do it on the day they announce it, not give an 18-month window otherwise consumers gain nothing.

Capping energy prices could lead to lower profits for energy companies and thus less investment to improve the service to consumers. It may even cause firms to exit the market leaving less choice for consumers.

Freezing energy prices means that if there were a fall in oil or gas prices the energy companies could not have been passed these lower costs on to consumers in lower prices for their electricity.

Conclusion:

Better regulation, encouraging consumers to switch suppliers and a maybe restructuring (disconnecting the generation of electricity from its retail) are arguably a better option than price freezes. Evidence from Spain and California shows the negative effects on profitability and investment that may come with price freezes. The UK energy sector needs substantial new investment and a price freeze is unlikely to help that. Ultimately cheap and reliable energy is what all consumers will benefit from and this will come from investment.