Oligopoly

# Presentation 1 –Intro to Oligopoly

Take notes. Your notes should cover the following questions:

* What is meant by an Oligopoly?
* What assumptions is the theory of Oligopoly based on?
* How does this market structure lead firms to act?
* What is meant by market concentration and ‘the n-firm concentrations ratio’?
* What limits might there be to ‘n-firm concentration ratio’ analysis?

# Article Task: What Are Concentration Ratios and How Useful Are They?

**Instructions:**  Read the short passage, answer the questions

When analysing market structure, the bipolar extremes of perfect competition and monopoly are often used as theoretical benchmarks, against which structural changes in a particular industry can be measured over time. However, perfect competition and pure monopoly rarely exist in the real world. Indeed most markets consist of a number of different firms, with at least *some* barriers to entry and at least *some* degree of product differentiation. The question, therefore, is whether a market behaves *more like* a perfectly competitive one (e.g. USB leads) or *more like* a monopoly (e.g. PC operating systems).

To determine this question, we need some way of gauging how close a particular market is to being a monopoly. A common starting point here is to use the ‘n-firm concentration ratio’ (CR). This is defined as ***a measure of the combined market share held by the largest n firms in an industry****.* Thus the ‘three-firm concentration ratio’ in the grocery industry measures the *combined market share held by the three largest supermarkets*. Likewise, the ‘four-firm concentration ratio’ in the automobile industry measures the *combined market share held by the four largest car manufacturers*. Importantly, an industry with a high CR is said to be ***highly concentrated***, as greater market share is held (i.e. concentrated) in the hands of a few firms.

Consider the following data on market shares in the grocery industry (2012):

|  |  |
| --- | --- |
| **Firm** | **Market Share (%)** |
| Tesco | 29.7 |
| Asda | 17.5 |
| Sainsbury’s | 16.6 |
| Morrisons | 12.2 |
| Co-operative | 6.3 |
| Waitrose | 4.5 |
| Others | 13.2 |

Calculate the three-firm CR

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Calculate the four-firm CR

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Calculate the five-firm CR

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Can you calculate the seven-firm CR? Explain your reasons:

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# Presentation 2 – Non-Cooperative Strategy I: The Kinked Demand Curve Model

Take notes. Your notes should cover the following questions:

* What is meant by the KDC? Diagram
* How can the elastic section of the KDC be explained?
* How can the inelastic section of the KDC be explained?
* What rule do Oligopolies therefore follow when faced with a KDC?
* What does the KDC mean for MR?
* What does the KDC mean for our profit max condition?
* What are the limitations of the KDC theory?

# Article task: Newspaper Price War

 **Instructions:**

* Read, highlight and annotate the two articles
* Answer the questions
* Discuss your answers with the class

**Article 1:** Tabloids declare price war

A price war has broken out between two UK tabloid papers, the Daily Mirror and the Sun.

Both papers are slashing their weekday price by a third to 20p in order to woo more readers.

The Mirror made the first move, informing staff of the decision on Friday evening.

Within hours, the Sun had followed suit, with a spokesman declaring: "It's war!"

**Targeting a younger clientele**

Last month, the Mirror was relaunched, dropping its red-top masthead, reclaiming the name Daily Mirror and declaring that it was adopting a more serious news agenda.

It says the price cut is the second phase of that relaunch, aimed at attracting new younger readers and persuading purchasers to take the paper more often.

The Mirror's editor Piers Morgan claimed the move was part of a long-term marketing strategy to rebuild the paper's circulation.

The Mirror has been under pressure recently, after being ordered to pay £3,500 damages to Naomi Campbell for publishing pictures of her leaving a Narcotics Anonymous meeting.

Its sister publication, the Sunday Mirror also ran into trouble last year when an article it published brought about the collapse of the Leeds footballers' trial.

**Sales decline**

Both the Sun and the Mirror have been steadily losing sales in recent years.

At present, the Sun comfortably outsells the Mirror, with well over three million copies to the Mirror's two million.

The Sun is owned by media magnate Rupert Murdoch, and is part of the News Corporation group that also includes the Times and the News of the World.

The Mirror is part of the Trinity Mirror group that includes the Sunday Mail and the Sunday People.

Share prices in both groups are expected to be under pressure on Monday.

The last major price war in the newspaper world broke out in 1993, and broadsheets such as the Independent and the Daily Telegraph suffered huge losses as a result.

**Article 2:** Sun ups stakes in tabloid price war

The tabloid newspaper price wars escalated today as the Sun slashed its price to 10p in London in an attempt to land a knockout blow on its arch-rival the Daily Mirror.

The editor of the Sun, David Yelland, who has vowed to "take apart the Daily Mirror's business and destroy it", said London represented the paper's biggest battleground.

The price cut will apply every weekday until further notice.

"This price war was begun by Trinity Mirror and, as we said at the time, it was started by them and will be finished by us on our terms. This war is serious," he said.

Yelland declared last month that the Sun would go on the offensive, describing Trinity Mirror's management as "two bit nobodies" who had allowed "the ego of the editor to dictate commercial policy".

The move is the latest in a savage round of price cutting in the tabloid newspaper market since Trinity Mirror cut the cover price of the Daily Mirror to 20p in May.

The Sun retaliated immediately to match the Mirror's price, while the Daily Express and the Daily Star followed suit, cutting their prices to 20p and 10p respectively.

Last month the Mirror put the "third phase" of its relaunch plan into action, putting its cover price back up to 32p in most areas of the country.

However, the paper stayed at 10p in Scotland and at 20p in the London, Meridian, central, west and south-west regions.

The latest escalation in the price war has surprised media buyers, who expected the Mirror's move to signal a gradual shift back towards full price for both newspapers.

Nicola Stewart, an analyst at WestLB Panmure, said investors would not welcome an escalation in the price war, which cost Trinity Mirror £4m during a month-long cut-throat battle.

The multimillion pound deficit was covered by a £20m warchest, set aside for a revamp of the Daily Mirror.

"They had earmarked £20m for the price wars and marketing budgets. And although they have tried relaunching the title intermittently over the past few years, it has not worked. New price cuts would be viewed negatively," she said.

Ms Steward added that the City saw the aggressive price-cutting campaign and Mirror relaunch as "ill-defined".

Although many agree the Mirror has to distinguish itself from the Sun if it is to arrest the general decline in newspaper circulation, the editor of the Daily Mirror, Piers Morgan, has been heavily criticised for the price cut.

The drop in cover price from 32p to 20p came just weeks after the Mirror relaunched as a serious paper, dropping its "tacky" red masthead, "trivia" stories such as Big Brother and celebrity-approved interviews.

Last Wednesday the tabloid splashed on the IRA's apology over civilian deaths with a photo of the aftermath of the Enniskillen bombing.

On the same day the Sun featured a story on Big Brother's Jade Goody and widened the sales gap between the papers to 1.7m - the biggest since Yelland took over as editor in 1998.

**Questions**

1. Using an appropriate diagram and information and data from both articles, analyse the industry’s response to Trinity Mirror’s decision in May 2002 to cut its weekday cover price.

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1. As well as the aggressive price cuts, how else has Trinity Mirror tried to compete with its arch-rival The Sun? How might the success / failure of this other strategy explain the firm’s decision to begin a price war?

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3) Later that same year, in August 2002, News Corporation announced record losses, partly as a result of its decision to retaliate and enter the price war. Almost a year later (in May 2003), News Corporation announced a return to profits, partly due to the ending of the newspaper price wars.

a) How does this fit in with economic theory, in particular the KDC model?

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b) Since 2003, the newspaper industry has continued to compete heavily, though not necessarily on price. Briefly explain two of these other methods.

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Presentation 3 - Non-Cooperative Strategy II: Game Theory

Take notes. Your notes should cover the following questions:

* What is meant by Game Theory?
* What is meant by a dominant strategy?
* What is meant by a Nash Equilibrium?
* What is the game Prisoner’s Dilemma? Represent players’ choices and payoffs in a payoff matrix.
* What is the result from two rational players playing Prisoner’s Dilemma?
* Why is Game theory relevant to oligopoly theory?
* What are the limitations of Game Theory as a model of Oligopolistic behaviour?

# Pair’s task: Game theory and Coffee shops

**Instructions:**

* Read about the fictional market for coffee at Kingston underground station
* In a pair, each choose a café
* Play the game for Monday., fill in the table to show the results of the game.
* Once you have played Monday, play Tuesday, then Wednesday, etc.
* Answer the discussion questions after playing the game.

At Kingston Underground station, the market for freshly served coffee is controlled by two firms – Café Dawson and CoffeeBella. Each firm has a choice of setting its price *high* or keeping it *low*.

The profit made by one firm depends on two things: its own price, and the price of the other firm. Of course, the owner of each shop understands that if they were to charge a price higher than that of their rival, then they would lose their customers to the rival firm.

|  |  |
| --- | --- |
| **Note**: CoffeeBella’s profit figures are shown on the left | Café Dawson |
| High | Low |
| ***CoffeeBella*** | ***High*** |  A ***1000***; 1000 |  B ***0***;1500 |
| ***Low*** |  C  ***1500***; 0 |  D ***500***;500 |

The pay-off table below shows the range of possible outcomes, with daily profit figures in £.

You have been hired as a strategist for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Your Rival is a strategist for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Your task is to decide on a daily basis whether price should be *high* or *low* for the following day’s business, in order to maximise weekly profits for your client.

Of course, you cannot communicate with your rival in advance. However, at the end of each trading day you will discover your rival’s price for that day (whether it was *high* or *low*) and you can use this information to decide your own price level for the next day.

Whoever earns the greatest profit at the end of the week wins the game.

**Results Table:**

|  |  |  |
| --- | --- | --- |
|   | **Café Dawson** | **CoffeeBella** |
| **Price** | **Profit** | **Price** | **Profit** |
| **Monday** |  |  |  |  |
| **Tuesday** |  |  |  |  |
| **Wednesday** |  |  |  |  |
| **Thursday** |  |  |  |  |
| **Friday** |  |  |  |  |
| **Saturday** |  |  |  |  |
| **Total** |  |  |  |  |

**Discussion Questions:**

What happened to the results of your games as you played more and more?

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Did either player ever cut their price? What happened in the round(s) after?

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Given your opponents choices, could you have increased your profits for the game?

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Did you work together when you played? How do you think your results would have differed if you had done the opposite?

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How can profits, both total and individual, differ with different strategies? What is the highest amount of profits possible for one player in the game? What is the highest amount of total profits possible for both players in the game?

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# Article task: Game Theory - Supermarkets during the festive season

**Instructions:** Read, highlight and annotate the article. Answer the question

There has been lots of talk in the media recently about the supermarkets’ Christmas advertising campaigns, Sainsbury’s have employed an Oscar winning director for their campaign, although he failed to spot the Co-op’s own brand range in the background, Tesco stole a march on the others by starting their advertising campaign on a Friday, which makes a lot of sense, but Asda wanted to get maximum exposure by launching their campaign during X-factor, the most watched program on commercial television. No doubt Morrison’s will be launching their Christmas campaign sometime in late January….

From an economic point of view, why do they do this? It makes very little sense as 90% of grocery shopping in the UK is already done in supermarkets, most of their customers will spend more at Christmas anyway, so why do they need to spend millions of pounds on extravagant marketing campaigns? In fact, the only people they are likely to attract are their own customers, or people who shop at supermarkets anyway, there is likely to be very little extra custom from new sources, so it all seems like a bit of a waste of money.

The reasoning behind it is that the supermarket chains fear nothing more than losing a customer to their rivals during the festive season, or, indeed, at any time of the year. As most economists will have read in Freakonomics, it makes little economic sense for supermarkets to be open 24 hours a day, the extra costs involved mean they simply lose money by doing so, but they are playing a game. If, that one time, one of their customers needs to shop at 3am, and they are not open, what will the customer do? S/he will go to a rival supermarket. No big deal you might think, they will only be spending a tiny percentage of their annual supermarket spend, so it will have no real impact on market share… BUT, what if that customer really likes this different shopping experience? What if they try a different product and like it? Where will they shop next time? That is a lot of revenue potentially lost by being closed at 3am, so they stay open, particularly in areas of high competition, just in case.

This is essentially the same reason that they spend so much on their Christmas campaigns. If Tesco decided it wasn’t going to ‘waste’ money on advertising this year, as they only attract a small percentage of new customers, their customers may be tempted by the luxurious nature of Sainsbury’s campaign, and Tesco may never see that customer again. People spend more in supermarkets in December than in any other month, regardless of advertising, so it would make sense for the supermarkets to get together and decide that none of them should advertise over the festive season. This would save each chain many millions of pounds, which they could either plough into dynamically changing the shopping environment for the better, or into price reductions for customers. I can imagine the meeting now: Tesco Marketing Director: We see the benefits of not conducting a Christmas advertising campaign, and if you won’t do one, we won’t do one. Sainsbury’s Marketing Director: We agree that it serves us all not to spend this money in this area, we won’t do one either Asda Marketing Director: Yeah, it’s a pinky promise from us too.

And they each go off and spend millions developing an advertising campaign for the month of December! Classic Game Theory. The incentive to cheat is too high, because if Tesco do a campaign and the others don’t, they will be swamped with custom, whereas Sainsbury’s and Asda will be left with an awful lot of unsold stock, so whilst, in theory, it makes sense for them not to advertise, in practice they always will. As a result, we all have to see sickening Christmas images and we have to try and live up to expectations…. Unless we have Sky+!

**Question:**

How does this example illustrate the prisoner’s dilemma? Can you evaluate it?

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Presentation 4 - Cooperative Strategy: Collusion and Cartels

Take notes. Your notes should cover the following questions:

* What is meant by collusion? What is meant by a cartel?
* How do oligopolies gain from coordinating price/quantity?
* What is meant by tacit collusion?
* What are the conditions necessary for collusion to succeed?
* Why are cartels inherently unstable and rarely long lasting?

# Article Task: Cartels

**Instructions:**

* Read the questions at the end of this handout, so you’ll know what to look out for in the articles.
* Then read all the articles, highlighting and annotating the key parts that will help you answer the questions, in particular:
	+ The format of the cartel (i.e. whether the focus is on fixing price or some other variable)
	+ The types of products affected by the cartel agreement
	+ The size of fines
	+ Issues of leniency

**Article 1**

EU smashes acrylic glass cartel

*The European Commission has fined four firms 345m euros ($444m; £235m) for fixing prices and operating a cartel in the sale of acrylic glass products.*

The punished companies were French group Arkema, British firms ICI and Lucite, and Irish business Quinn Barlo. They were found to have fixed prices and exchanged sensitive information between 1997 and 2002. Acrylic glass is used in areas such as lighting and technology.

**'Cold shower'**

The fines are the fourth-largest handed out by the European Commission for price fixing. "These fines will serve as a cold shower for the management and shareholders of all these companies, who have to realise that cartels cannot and will not be tolerated," said EU Competition Commissioner Neelie Kroes. German company Degussa was also involved in the cartel, but escaped a fine because it fully co-operated with Commission, providing it with the information and evidence required to find the others guilty. Arkema, which was recently spun-off from French oil giant Total, was fined 219m euros, ICI 91.4m, Lucite 25m and Quinn Barlo 9m euros. The companies will have the chance to appeal against the decision at the European Court of First Instance. Earlier this month, the Commission hit seven chemicals companies with total fines of 388m euros for operating a similar price fixing cartel. Degussa was also involved in that case, but was again let off for co-operating with the European Commission.

**Article 2**

EU orders fine for rubber cartel

*The European Commission has fined five oil and chemical companies £519m ($682m) for price-fixing.*

Italy's Eni faces the largest fine, of €272m (£183m; $357m), while Royal Dutch Shell was fined €160.8m. The EU imposed the fine after learning that five firms were fixing the price of synthetic rubber used for tyres.

The fine is the second largest the commission has imposed for a cartel. It came after Germany's Bayer told EU lawmakers of the price-fixing and provided them with information and evidence about the cartel. This move gave Bayer immunity from any fine, which could have amounted to €204m.

**Repeat offenders**

Conversely, the fines for both Eni and Royal Dutch Shell were increased by 50% because they have previously committed similar offences. In particular, Shell (along with Total) was found guilty of fixing the price of bitumen in September. Other firms fined over the latest price-fixing scheme include Dow Chemical, which has been ordered to pay €64.5m. The figure was 40% below the original figure after Dow provided regulators with information and evidence in support of Bayer's findings. Unipetrol, a Czech refining firm, has been told to pay €17.5m, while Polish firm Trade Stomil faces a €3.8m fine. The largest fine imposed by the commission on a cartel came in 2001, after it ordered eight pharmaceutical firms to pay €790m for fixing the price of vitamins.

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**Article 3**

OFT takes Action (Man!)

The UK’s Office of Fair Trading (OFT) has taken on 'Action Man' with a record fine to toy retailers for price-fixing. The move signals a clampdown on companies who collude to fix prices - a practice which damages consumer interests. The OFT has fined Argos £17.28m and Littlewoods £5.37m. The toy manufacturer involved, Hasbro, avoided a fine as they 'blew the whistle' on the practice. However, they were fined £4.95m in November 2002 for other similar offences involving price-fixing with wholesalers. In the latest case, Argos and Littlewoods (through their Index catalogue division) agreed with Hasbro (who also manufactures an extensive range of toys and games including Monopoly, Cluedo and Action Man) not to sell Hasbro products below the retail price. This ruling is done under the Competition Act 1998. Competition legislation will be further enhanced in the summer of 2003 when the Enterprise Act 2002 comes into force, and cartel activity will become a criminal offence punishable with up to 5 years’ imprisonment.

**Article 4**

EU fines chemicals sector cartel

*The European Commission has fined seven companies a total of 388m euros ($491m; £267m) for operating a cartel in the chemicals sector.*

The firms include Belgium’s Solvay, France's Arkema, Dutch business Akzo Nobel, Finland's Kemira, Spain's FMC Foret, and Snia & Edison from Italy.

Following a probe by the European Commission, they were found to have exchanged commercially important and confidential information. In addition, the firms limited output and allocated market shares and customers, to avoid competing with each other.

They were also found to have fixed target prices of two products, hydrogen peroxide and perborate.

**Unacceptable**

The Commission said two other companies were involved in the 1994 to 2000 cartel but not fined: Germany's Degussa and France's Air Liquide. Degussa, a repeat offender, was let off a fine of 130m euros for providing the Commission with information and evidence about the cartel. Air Liquide could not be fined since it had left the market in 1998. "Cartels are unacceptable corporate behaviour that deprive customers of the benefits of competition in the single market," said EU Competition Commissioner Neelie Kroes. These high fines take into account that certain companies are repeat offenders. Directors and shareholders alike should ask why these practices were allowed to continue."

**Big market**

Hydrogen peroxide is an oxidising agent used for bleaching textiles. It is also used as a disinfectant in sewage treatment. Perborate is used mainly as an active substance in synthetic detergents and washing powders. In 2000 the combined European market value for both products totalled 470m euros.

**Article 5**

Building companies fined £129.5m

*Some of the UK's leading building companies have been handed big fines by the Office of Fair Trading (OFT) for rigging bids for contracts.*

The OFT has fined a total of 103 firms £129.5m for colluding with competitors on building contracts. It said the firms colluded among themselves during the bidding process, leading to customers, such as local authorities, having to pay too much. The ruling comes at the end of a five-year investigation by the OFT.

**Disclosing prices**

The fines were imposed for “bid-rigging”, a practice which is also known as "cover pricing". This is where building firms submit quotes for jobs that are artificially high and therefore not actually priced to win the contract. So the client gets a misleading idea about the real extent of competition. The process will often involve builders disclosing to one another what price they intend to quote. The firm which is chosen by the cartel to “win” the contract will have typically quoted around 20-25% above the competitive price. Then in another round of bidding, a different firm will be chosen to “win” the contract.Kier Group was fined £17.9m, more than any other building firm. Interserve was fined £11.6m, while other companies fined more than £5m included Galliford Try, Durkan Holdings and Balfour Beatty. Alan Ritchie, general secretary of construction union Ucatt, said: "It is clear that construction companies can't be trusted to run their affairs properly. "A zero tolerance approach must be taken with the construction industry to ensure that companies follow the law."

**'Unfair'**

The UK Construction Group, which represents 29 contractors, called the decision to penalise the firms "unfair". "It is perverse and unfair to impose such disproportionate penalties on a small number of contractors selected by geographical sampling." Adam Aldred, competition partner at law firm Addleshaw Goddard, which represents five of the firms investigated, said the OFT was the first competition authority in Europe to rule against building firms for the practice of cover pricing.

**'Price distortions'**

In 11 instances investigated by the OFT, the body found that the lowest bidder faced no competition because all other bids were artificial “cover bids”. It also found six instances where successful bidders had paid a sum of money to the unsuccessful bidder. These payments were between £2,500 and £60,000 and were made using false invoices. The infringements affected building projects across England worth in excess of £200m, including schools, universities and hospitals, between 2000 and 2006. The OFT said that 83 out of the 103 firms had received reductions in their fines because they had already admitted the practice, thereby giving the OFT important evidence needed to prosecute. "Our investigation has uncovered significant infringements of competition law on nearly 200 projects across England," said Simon Williams at the OFT. "Bidding processes designed to ensure clients and in many cases taxpayers receive the best possible choice and price were distorted, creating a real risk of increased prices."

**Article 6**

EU fines E.On and Gaz de France

*Energy giants E.On and Gaz De France (GDF) Suez have been fined by European Commission competition regulators for carving up gas markets between them.*

Both Germany's E.On and France's GDF Suez have been fined €553m ($770m; £477m) by the Commission. The firms agreed in 1975 not to compete with each other in their national gas markets when they started to import gas through a pipeline from Russia. "The Commission has no alternative but to impose high fines," it said. "They maintained the market-sharing agreement after European gas markets were liberalised, and only abandoned it definitely in 2005." EU Competition Commissioner Neelie Kroes said the secret carve-up had deprived customers of price competition and choice of supplier in two of the largest markets in the 27-nation EU. "This decision sends a strong signal to energy incumbents that the commission will not tolerate any form of anti-competitive behaviour," she added.

**Questions:**

1. Identify and explain the four main types of cartel agreement.

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1. Why are price-fixing agreements and other cartels illegal?

(**Clue**: think about the functions of the price mechanism as well as issues of consumer protection and economic efficiency)

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1. In most of the price-fixing cases, the product in question tends to be homogeneous (e.g. PVC, rubber, acrylic glass, DRAM, electricity, etc). Why might homogeneous goods be more prone to price-fixing? (**Clue**: think about PED between *different suppliers of the same good*)

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1. Most price-fixing tends to be on goods which are an input in the production process of another, finished good. Why might these raw materials / intermediate goods be more prone to price-fixing? (**Clue**: think about PED of *the good as a whole* in the event of a coordinated price rise)

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1. Using company examples from the articles, explain what is meant by ‘leniency’.

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1. **Extension**: Is ‘leniency’ a good or a bad thing for society?

(**Clue**: think about issues of responsibility *versus* costs for the OFT / EU, the continued existence of a cartel, the extent of mistrust amongst oligopolists, etc)

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1. **Extension**: Criminal penalties such as individual fines and jail sentences (as in the Samsung article) have been used in US price-fixing cases for over 100 years. Such penalties have only recently been introduced in the UK, since the Enterprise Act 2002 came into force.

What do you think are the advantages of criminal sanctions being taken against the individual directors, as opposed to administrative fines being imposed on the firm only?

(**Clue**: think about the ‘principal-agent problem’ ***and*** how long it might take for the authorities to detect, investigate and take action against a cartel)

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# Presentation 5 – Non-Price Competition

Take notes. Your notes should cover the following questions:

* What is meant by non-price competition?
* How do firms compete outside of prices?

# Assignment: Oligopoly & Game Theory

**SECTION A**

1. The following table shows the sales (millions) of tablet computers worldwide in quarter 1, 2016 and quarter 1, 2017:

|  |
| --- |
| **Sales of tablets (millions)** |
| **Manufacturer** | **Quarter 1, 2016** | **Quarter 1, 2017** |
| Apple | 10.3 | 8.9 |
| Samsung | 6.0 | 6.0 |
| Huawei | 2.0 | 2.7 |
| Amazon | 2.2 | 2.2 |
| Lenovo | 2.2 | 2.1 |
| others | 16.9 | 14.4 |
| Total | 39.6 | 36.3 |

1. The 3-firm concentration ratio in quarter 1, 2016 was 46.7%. Calculate the 3-firm concentration ratio in quarter 1, 2017 in this market. You are advised to show your working.

[2]

1. Explain **one** barrier to entry that is likely to exist in the tablet computer market.

[2]

1. In 2008 the competition authority in New Zealand investigated the behaviour of 13 airlines. There was evidence that the airlines colluded to raise the price of air freight by imposing similar fuel surcharges for up to seven years previously. The authority noted that it might have involved as many as 60 airlines.

What is the most likely reason for collusion to occur in this industry?

[1]

**A** Airlines involved can increase their profits

**B** Barriers to entry are low

**C** Cartels are not subject to regulation

**D** The market is contestable

**E** There is a low concentration ratio

1. Game theory can be used to explain the breakdown of a cartel. Which of the following is the most likely cause of such a breakdown?

[1]

**A** A possibility of an individual member gaining short term profits

**B** An aim of reaching long term equilibrium

**C** Economies of scale

**D** Satisficing behaviour

**E** Reduced risk of collusive behaviour being investigated

1. The following matrix shows the possible revenue outcomes of two firms tendering building services to the government. Assuming Hanna Ltd and Jax Ltd have agreed a pricing strategy that will give each a revenue of £1000, what change in pricing strategy would increase the revenue for Hanna Ltd?

[1]



**A** Both firms set a high price

**B** Jax Ltd sets a high price and Hanna Ltd a low price

**C** Hanna Ltd sets a high price and Jax Ltd a low price

**D** Both firms set a low price

**E** Both firms set a price to increase consumer surplus

**SECTION B**

**Supermarkets**

**Extract 1 Tesco to open Harris + Hoole coffee shop in flagship store**

Tesco is opening its first Harris + Hoole coffee shop inside one of its most important London stores. The supermarket giant has secured planning permission to install a branch of the coffee shop chain inside its ‘lifestyle store’ near London Bridge station. Harris + Hoole (H+H) promotes itself as an independent family business but is, in fact, 49% owned by Tesco.

H+H is also preparing to open another of its coffee shops next door to Tesco Express in Imperial Wharf, west London, in a property owned by Tesco. A Tesco spokesman said “We think our customers will love Harris + Hoole’s freshly roasted coffee and great quality cakes and pastries and look forward to its opening later this year.”

H+H, named after coffee-loving characters in the Diary of Samuel Pepys, does not mention Tesco’s ownership stake in stores or on its menus, and promotes itself as a small, family run business.

**Extract 2 Philip Clarke, Chief Executive at Tesco, writing on Tesco website**

You might have seen some recent press coverage about our investment in the start-up coffee shop business, Harris + Hoole. We’ve always been upfront about our investment in H+H. We like backing great brands, helping them to grow and to realise their potential. We’ve done it with suppliers for years. Great ideas can find it hard to get backing these days, so we’re pleased to be in a position to help entrepreneurs achieve their vision.

Some people have asked why it’s not branded Tesco. The H+H brand is part of its value – its distinctiveness and appeal. So what’s in it for Tesco? I’ve talked a lot about loving the stores we have, making them an appealing destination for customers to come to.

**Extract 3 Supermarket firms look to co-trading to reinvigorate their future**

Britons are falling out of love with hypermarkets as the higher price of petrol puts them off driving to big out of town stores. With many budgeting carefully, they are also keen to avoid the temptations of a hypermarket, with its mix of food, fashion and furniture. At the same time, more and more non-food items, such as electricals, are moving online. UK online grocery sales by value are forecast to rise almost 100% to £11.1 billion over the next five years. Sales by discount stores such as Lidl are forecast to increase 65% to £12.4 billion, while convenience store sales are expected to rise 29% to £43.6 billion. However, sales at supermarkets and hypermarkets, defined as stores of more than 25 000 square feet (2 323 square metres), are forecast to rise by just 6.4% to £76.9 billion, and some, such as Tesco, announced a fall in profits in 2012, for the first time in 20 years.

One idea being proposed is to bring in brands from outside the supermarket sector to use surplus space and make the giant sheds more enticing to shoppers. According to Andy Clarke, Chief Executive of Asda, this could mean “mini high streets indoors”. Tesco recently bought Giraffe, the family-friendly restaurant chain, for £50 million. Neil Saunders, Managing Director of Conlumino, a retail research group, says: “It’s very much shop-in-shop. For me it’s a recognition that there is a lot of surplus space in supermarkets that is not terribly productive.”

The movement of non-food products from supermarket shelves to internet browsers presents grocers with surplus capacity in their biggest stores. Mr Clarke says Asda could go further and is considering letting space to non-competing local suppliers, or associated retailers, such as shoe repairers, hairdressers, travel agents and pharmacies. Although Sainsbury’s does not have many hypermarkets, it already has more than 270 pharmacies in its stores, as well as about 10 private dental practices and 40 doctors’ surgeries in stores or on land it owns. And it is not just supermarkets that are exploring using their stores more creatively. Kingfisher, the DIY chain, has determined that its UK business, B&Q, could take the same amount of money with about 20% less space. Asda has already agreed to lease more than half of a large B&Q store in Kent.

1. Using the data in Extract 3 and an appropriate diagram, assess reasons why Tesco’s profits fell in 2012.

[12]

1. Evaluate pricing and non-pricing strategies that supermarket firms might use to increase revenue.

[15]

**SECTION C**

1. Competing firms within a market agree to collude. Discuss the likely impact of this collusive behaviour on the firms and consumers in this market.

[25]

1. ‘A price war inevitably causes long term harm to consumers and the employees of firms within the industry’. Critically examine this statement.

[25]

1. To what extent might firms in an oligopolistic market compete using non-price strategies?

[25]