

Competition between the three major supermarkets economics essay



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For my Extended Essay, I decided to investigate the competition between the three major supermarkets in my local area, and whether they collude or not, prompting my research question: To what extent do the larger supermarkets in my local area collude with each other? By analysing data collected on pricing from the three supermarkets, it was found that two of the three supermarkets at hand colluded tacitly with each other, under and oligopoly market structure. The prices of fifteen identical prices were recorded across a time span of three weeks. The analyses of these prices lead to two conclusions. Firstly, it was found that two supermarkets colluded with each other, but still had non-price competition between them. This was mainly due to the advantage of the two stores acting as a monopoly by charging the same price. This allowed the two supermarkets to make abnormal profit, which in turn they used to create a stronger brand loyalty, and thus, a more inelastic demand curve. Secondly, it was found one of the supermarkets was undercutting the other two supermarkets prices. The main reason for this was that the supermarket could gain greater revenue at the time by undercutting rivals, due to having more customers. These findings show that there was collusion between larger supermarkets in my area, but not between all supermarkets. Finally, the essay could be improved if I included more products in my data collection, as well as collecting the data over a longer time period.

1. INTRODUCTION

Tesco, Asda and Sainsburys are the three main supermarkets that constitute weekly shopping for the public in my local area, west Charlton. These three supermarkets are recognised for their vast range in goods and at affordable

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prices. It is no surprise then that in terms of market share, they each comprise the top three places for having the most market share in the U. K.

1 During the last couple of years, though, I have noticed that many of the smaller supermarkets in the same area have begun to close down.

Since enrolling in the IB Higher Economics course and studying market structures in particular, Ive developed an interest into how supermarkets compete with each other, or even, how they collude together. Maybe, given their large hold of the market share, the benefits from collusion would be unmatched compared to other smaller supermarkets, in terms of increased sales revenue. Also, formal collusion, one of two forms of collusion, is illegal as it goes against the Competition Act 1998 (the Act) Chapter 12.

Therefore, the research question I have formulated is To what extent do the larger supermarkets in my local area collude with each other?

To be able to explore this research question, I will first present a summary of the supermarkets, where the characteristics of them will be described. This will lead on to my next section where I will discuss relevant theoretical market structures and relate economic theories to them. After I have presented these theories, I will hypothesise which market structure is adequate for the supermarkets present, thus creating a sufficient research design where the prices of similar products will be compared. Finally, I will analyse the collected data and prove or disprove my research question, leading to a conclusion of my essay and exploring possible limitations.

2. MARKET SUMMARY

In the area I am studying there are three main supermarkets; Asda, Tesco and Sainsburys, situated in West Charlton (appendix 1. 1). Each supermarket is similar in size, satisfying the vast needs of the inhabitants in the area. It is worth mentioning that due to the supermarkets being of a substantial size structurally, there must have been large start up costs. Each of the three engages in non-price competition. This includes things such as advertising on T. V, having parking areas and the use of brand names. The offerings of these services are in the attempt to attract more customers. Take for example, Asda, which has parking as well as various sectors to its stores such as electrical and clothing sections as well as groceries. The aim of this is that customers can visit only this store by satisfying all their needs from the vast offers of goods. Furthermore, each supermarket advertises their brand names to gain more customers due to the brand loyalty it has established. This could make their demand curve more inelastic, meaning that an increase in the price of a good would result in the increased revenue exceeding the reduction of quantity sold (appendix 1. 2).

These three supermarkets also dictate the majority of market share, as I have mentioned. Lastly, it is worth mentioning that Sainsbury's and Asda are open for 24 hours from Tuesday to Friday, otherwise it is from 7 in the morning to 11 in the evening. Tesco are open from 7 to 11 everyday, apart from Sunday when they open an hour later and close an hour earlier. I don't think that the slightly lesser hours that Tesco is opened during the week will affect my research much, or at all. This is due to the fact that I don't believe Tesco make much of their sales between midnight and 7 in the morning.

3. MARKET STRUCTURE THEORIES

I will now present the four types of market structure theories and their assumptions. I will not going into great detail on the structure of a monopoly as this is not a possible market structure for the supermarkets, given the fact that there is evidently more than one firm in the area. This is the same for perfect competition, as the goods produced by supermarkets are not identical.

Firstly, I will present the market structure of a monopolistic competition. The assumptions of this market structure are³:

- * The industry is made up by a large number of firms
- * The firms each act independently of each other, due to each firm being small, relative to the size of the industry
- * The firms produce differentiated products; consumers can tell one product from another
- * Firms are free to enter and exit the industry, due to lack of barriers to entry and exit
- * Firms are able to make abnormal profits in the short run, however due to lack of barriers to entry; this attracts other firms into the industry. This means that in the long run, only normal profits are able to be made

Due to the fact that the supermarkets in question are of a substantial size, I believe that the start up cost in itself will be of a great barrier to entry. Also, I

don't believe the industry I am examining is made up of a large number of firms, as there are only three supermarkets of their type in the local area.

Another market structure that the supermarkets could come under is an oligopoly. These are the basic assumption of an Oligopoly: 4

- * A few firms dominate the industry
- * There are barriers to entry and/or exit for the industry
- * The firms are price makers as they have a downward sloping demand curve
- * The firms are interdependent; the action of one firm can have an effect on another
- * Abnormal profits can be made both in the short run and long run

In addition to these assumptions, firms in an Oligopoly can be either collusive or non-collusive.

Non collusive oligopolies face price stability due to the kinked demand curve. This is shown in figure 1.

Figure 15

Due to the kinked demand curve, price will be stabilized at price $\frac{1}{2}P$. This happens as the Price elasticity of Demand (PED: The responsiveness of the quantity demanded of a good or service to a change in its price) above price $\frac{1}{2}P$ is greater than 1. This means that an increase in price above point $\frac{1}{2}P$ will result in a loss of revenue. Likewise, the PED below price

$\frac{1}{2}P\frac{1}{2}$ is less than one, meaning a reduction in price to this level will result in a loss of revenue again. Due to these factors, it is logical that firms do not favour either move, so they are said to be stable at point P. This also results in the output being stable at point $\frac{1}{2}Q\frac{1}{2}$ as a change in marginal cost from MC1 to MC2 would still mean output would stay at $\frac{1}{2}Q\frac{1}{2}$. This is due to firms in this market structure producing at the profit maximising point, where MC= MR. 7

Firms in this market structure may also be collusive. This exists when the firms collude to charge the same prices for their products, in effect acting as a monopoly. There are two types of collusion, formal and tacit. Formal collusion exists when firms openly agree on the prices they will charge. In the case of supermarkets in the U. K, it is illegal for this to occur as it is deemed to be going against the interest of the consumer due to it resulting in less output and higher prices. Tacit collusion, however, exists when firms charge the same prices without any formal collusion. The three supermarkets in question may have decided to charge the same prices and not compete with each other, in order to increase revenue. This is represented in figure 2.

Figure 28

As shown in figure 2, firms can make abnormal profits between their price and cost, due to the price exceeding the cost to the firm. This form of collusion is very possible as each supermarket is very similar to each other and all produce similar type goods.

Firms in an Oligopoly can experience economies of scale. Economies of scale are any decreases in the long-run average costs that occur when a firm

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changes all of its factors of production, in order to increase its scale of output. There are a number of different economies of scale that can benefit a firm as it increases its scale of output. These can be:

- * Specialisation- Firms can be more efficient when they specialize in different areas of expertise
- * Division of labour- This is the breaking down of a longer production process into many smaller activities, making production more efficient by reducing unit costs
- * Bulk buying- As firms increase in scale they are often able to negotiate discounts with their suppliers, as they are buying more altogether. This reduces the firm's cost of input, and thus their unit costs of production
- * Financial economies- Larger firms are able to get loans at lower interest rates, as they are seen as a lesser risk to lend money to than smaller firms, by the bank

The assumptions of a monopoly are as followed:

- * Only one firm producing the product at hand, so the firm is the industry
- * High barriers to entry and/or exit
- * Abnormal profits can be made in the long run, due to barriers to entry

This market structure is unlikely to be present in my research area as there are clearly more than firm in the same industry.

Finally, the basic assumptions of perfect competition are:

- * The industry is made up by many firms, so total output cannot be affected by one firm
- * The firms all produce homogeneous (exactly identical) products
- * No barriers to entry and/or exit
- * Producers and consumers all have perfect knowledge of the market

Again, this market structure is unlikely to feature in my study, mainly due to the fact that there is product differentiation, as well as evident start up costs.

4. HYPOTHESIS

After reviewing and comparing the discussed market summary and theories, I have hypothesised that the market structure the supermarkets are in are oligopoly. I have reached this hypothesis for the main reasons that:

- * There are evident barriers to entry such as strong branding of products and start up costs
- * There are only three supermarkets in the local area, between them sharing almost 64% of the market share. 11

In addition to these points, I believe tacit collusion between the three supermarkets would greatly benefit their competition with other smaller supermarkets in the area. It would also avoid unnecessary competition between each other, and perhaps result in gaining more customers.

After hypothesising that the three supermarkets are in an oligopoly, and thus capable of collusion, I will now be able to test my research question $\frac{1}{2}$ To what extent do the larger supermarkets in my local area collude with each other? $\frac{1}{2}$

5. RESEARCH DESIGN

For me to test my formulated research question, I will create a methodology. I will compare the prices of 15 different products across the three supermarkets. I will check the prices once every week for three weeks, so I can get a mean price at the end, making the result more reliable. I will make sure the prices of the same products are taken in the same time period, and where possible, use products produced in the U. K. This would avoid export costs affected and invalidating results. If not enough U. K based products can be found, I will make sure that any exported product used will have been exported from all supermarkets. This will maintain a degree of validity in the research. I will also avoid products produced by the supermarkets themselves. This would be because the cost of production may be very different from one supermarket compared to another, thus having a large impact on the final pricing. I will compare independent brands that feature across all three stores. Each supermarket in the area of West Charlton is located within one mile of each other. 12

In terms of the data collection, I will go to each supermarket and compare similar, or when possible, identical products and their prices. I will note down their current price at which they sell at. Also, I will go to each supermarket close to their opening times on Saturday, as on this day the stores all open

at the same time. The reason for not going later on in the day is because of price reduction on non-durable goods that are set to expire. If I include goods which prices have just been reduced temporarily to get rid of lasting stock, it would not represent the overall pricing of the good in regular situations.

Lastly, I will compare the prices using adequate means of analysis; thus deducing whether or not there is enough similar pricing evident to suggest collusion of some sort.

6. DATA COLLECTION & ANALYSIS

Firstly, I will present my data collected for the prices of 15 products from all three supermarkets, across a span of three weeks, once a week. Table 1 shows my findings of the prices.

Table 1

Source: Prices collected by me for all supermarkets

To analyse the spread of the data, I will work out the standard deviation for each product, which will indicate the spread of the data. A lower standard deviation would indicate a set of closer, similar prices, likewise a higher standard deviation would imply less chance of collusion evident. 13

The standard deviation for each product is represented in Table 2, along with the mean prices for each product over the three weeks.

From the standard deviation, we can see they are all overall quite small, indicating the prices are all close to the mean price. This seems to indicate

some form of collusion occurring between the supermarkets. However, there are some exceptions. For some goods the standard deviation is relatively high to the other products. Also, in most of these goods, such as soft drinks, crisp packs, pizza, ice cream and cooked chicken, it is Asda who feature the lowest price out of the three, while Tesco and Sainsbury's have similar prices to each other. This seems to show that there is possible collusion between Tesco and Sainsbury's, while Asda undercuts their prices.

The similar pricing between Sainsbury's and Tesco suggests a form of collusion, tacit or formal. I inquired to the Office of Fair Trading (OFT) about my findings. The OFT are a government based organisation that ensure businesses are fair and competitive. In a reply they stated:

Although similar prices might seem to suggest that companies are getting together to agree them, this is not necessarily the case. For example, one company might have independently decided to price at a level similar to another or both may have independently decided to behave in the same way. 15

As similar pricing does not necessarily mean formal collusion is taking place, I will assume that the two supermarkets are tacitly colluding, although this area may be needed to be researched into further for a definite result.

As well as colluding, I have also noticed that there is evidence of non-price competition between Tesco and Sainsbury's. This included things such as the use of advertising, free delivery and other services situated in the store themselves. This has led to each supermarket gaining brand loyalty, and as a result, creating a more inelastic demand curve for their products. This is <https://assignbuster.com/competition-between-the-three-major-supermarkets-economics-essay/>

possibly another explanation of why these two supermarkets in particular where of a higher price overall, compared to the other supermarket, Asda.

For the case of Asda, they have engaged in price war tactics, rather than forming a collusion. In this case, undercutting rivals may be beneficial to them by increasing their sales revenue. This can be represented by $\frac{1}{2}$ game theory $\frac{1}{2}$.

Supermarket

The table shows that if both supermarkets lower price, they will make less revenue than if they had colluded. However, it is still tempting to undercut the other store as then that would lead to greater revenue. The highlighted box shows the possible situation at the moment, with Asda undercutting the other supermarkets thus increasing revenue. This choice making situation is known as $\frac{1}{2}$ the prisoner $\frac{1}{2}$ s dilemma $\frac{1}{2}$. 16

Another explanation for the lower price offered by Asda for goods could be down to lower unit costs caused by a greater storage capacity. The supermarket $\frac{1}{2}$ s cost of storage mainly depends on the material used to build them, which is the surface area of the building. The level of output for the supermarket will depend on its storage capacity, so its volume area. As the size of a supermarket increases, the volume to surface area ratio increases. Therefore, the cost per unit overall will be much less than a smaller supermarket, such as Sainsbury $\frac{1}{2}$ s and Tesco.

Lastly, from analysing my collected data, I have reached the conclusions:

* Tesco and Sainsbury's collude by charging very similar prices, but still have non-price competition between them.

* Asda competes with a price-war tactic, by undercutting the other two supermarkets.

7. CONCLUSION

The aim of my research was to investigate the type of competition, if any, between the three major supermarkets in my area, West Charlton. The question 'To what extent do the larger supermarkets in my local area collude with each other?' prompted me to gather the pricing of 15 identical products across the three stores. The prices were taken every Saturday morning one a week for three weeks.

I found that two of the three supermarkets had signs of collusion, while the third supermarket engaged in a price-war by undercutting the other two supermarkets.

Firstly, Tesco and Sainsbury's have similar prices to each other, while having higher prices than Asda. This was mainly due to the two stores acting as a monopoly by colluding and charging similar prices. This meant that each firm could make abnormal profit, which they used to create greater brand loyalty, thus making the demand for their products more inelastic.

Lastly, the final supermarket, Asda, engaged in price-war tactics. The main reason for this was due to the idea of gaining more revenue as indicated by 'the prisoner's dilemma'. In addition to this, Asda had a greater storage capacity, meaning an overall lower cost per unit.

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Therefore, after collecting data and analysing them, it is found that there was evidence of collusion, but only between two of the supermarkets, not all three studied.

There are, though, apparent limitations in my study. Firstly, my area of research was only in one town. If there is found to be some form of collusion between supermarkets here, it doesn't necessarily mean it is occurring all over the country with those same supermarkets. Also, the time span of my investigation was three weeks. This may not have been enough time to gather an appropriate amount of results to come to a reliable decision. This could be said the same for the amount of products used in my investigation; 15 products may not have been enough to come to an appropriate result. As well as this, I could not make a judgment whether the collusion between Tesco and Sainsbury's was either tacit or collusion. This would have to be investigated further. All of these limitations overlook the aim of my study and thus should be inspected further.

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