SUMMATIVE ASSIGNMENT
Can non-price competition be a substitute for price competition in oligopoly? Consider this in the case of the European brewing industry.

The European brewing industry has seen dramatic changes in the period post World War II. The industry started off as a monopolistic one during the late 1940s and 50s, where in 1947, 404 independent brewing companies owned 465 plants. The four-firm concentration ratio was 21%[1]. This began to change in next decade as the larger companies began to merge with (or buy out) the smaller ones and thus relatively quickly the context of the industry saw a change with five major firms dominating the industry during the 1970s, (by 1976 the four-firm ratio was 59%). These companies were; Bas, Whitbread, Grand Metropolitan, Allied and Courage. These brewers owned pubs all over the country and the likes of Whitbread owned over 4000. Brewers only allowed the sale of their product in their pubs and thus there was little competition with a small variety of beers. The brewing industry has been watched very closely and the Monopolist Commission (now called the Competition Commission) has reviewed the industry four times since the 1950s. As a result of one of these reports the government launched a new law that limited brewers to own only 2000 pubs and these pubs must have at least one guest ale being served. These caused a huge reformation in the industry as competition started to increase and the number of beers available increased. By the 1990s, 25 000 pubs had changed ownership as they were sold of to pub chains (e.g. Yates' Wine Lodge), which are still around today. Brewing companies still tried to remain at top by lending money to pubs in return for them serving their ale until the money was paid off. The dramatic fall in the number of brewers, shows the greater economies of scale in both the production and the advertising.

The large beer markets are in north Europe but are now starting to decline. They grew at about a rate of 2% per annum until 1991, but are now declining at about the same rate. However not all markets are showing a decline, but any growth is very static such as in France. There are various reasons for this decline such as the decline in the age bracket of 18 – 24 year olds. This is the age where alcohol makers will want to target most of their products, since they are probably the most active in 'going out' and consume the most. The increase of FABs (Flavoured Alcoholic Beverage) has caused a massive increase in the variety and type of substitute goods to beers.

Looking at the nature of the product will enable a better understanding of the industry and thus aid the production of a clearer answer. Beers are divided into lagers and ales. Within this they can be subdivided by their alcoholic content (for example lagers with a content of over 4.2% and ales with 4.1% abv., are classified as premium) or how they are packaged to be sold. The later involves whether they are sold as draught or in cans or bottles. Beers are branded goods, but major brands can be considered as homogeneous, due their similarities in price, taste, appearance and also alcohol content. In contrast to this, there are numerous specialist beers such as, bottle conditioned lagers and ales, wheat beers, low and zero alcohol content beers and strong lager (up to 8% abv). As a result of these factors the beer market can be separated into two distinctive parts,

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[1] *Price Theory and Its Users,* Donald Stephenson Watson and Malcolm Getz, 5th edition, 1993

which are the high volume strong brands that have a wide appeal across different age groups, and the small niche brands that target specific consumers by age and income class.[2] Over the last few years, the trend in the UK has seen the demand/consumption of ales to decrease whilst there has been an increase for lagers. In 1999, 85.7% of the consumption of all beers were lagers and premium lagers.[3] However in Belgium and Germany, the demand for specialised ales as increased whereas the increase in lagers has been very static.

This essay has examined the brewing Industry in Europe, by looking at its history, the context of it and the nature of the product. The next part of the essay will discuss an oligopoly and see whether non-price competition can be a substitute for price competition. An oligopoly can be described as an industry with only a few leading producers, and each one recognising that their price doesn't solely depend on it's own output, but also the actions carried out by the important competitors in that industry.[4] The common characteristics of an oligopoly can evidently be seen in the brewing industry as discussed above. There are a few but concentrated sellers who all react to each other, and all the firms are selling undifferentiated products. In an oligopoly firms face a common, and basic, dilemma of whether to cooperate or compete. The following passage by Chrystal sums up the benefits for each case, "The firms in an oligopolistic industry will make more profits as a group if they cooperate; any one firm, however, may make more profits for itself if it defects while the others cooperate".[5]

Cooperation involves a few of the rivals collectively acting like a monopolist, and emphasis is put on output and not price. The easiest way to understand how this works is to look at a duopoly, where there are two firms (if a theory works for many firms in an oligopoly then it should work for just two). The following example explains how this can work. A small green grocer B, is established in a small village next to a green grocer A. Shop B may ask A if they can have half the monopoly. This way, they can both keep prices at the high price of the original monopoly, as that would allow them to produce the highest profits, and also remain exploiting the consumer. However, this cooperation could be hard to maintain, since shop A may, for example, feel resentment for shop B taking half it's profits. Therefore the shop my want to cheat the agreement in order to make higher profits, by either increasing output or lowering prices to captivate the market. If however both shops managed to survive the original arrangement, then surely other firms would find this more attractive and soon the duopoly would have many more firms involved, and cheating to the original plans would become much more likely.

There are various ways of firms in an oligopoly to try to surpass their opposition, and lowering prices is one of them. Price undercutting results in the final prices being lower and thus profits are limited. One of the solutions to this price war is the Bertrand Equilibrium, which can be described as follows. If the assumption is made that $MC < P1 < P2$, and that firm 1 earns P1 – MC on each unit sold, whereas firm 2 earns nothing. Firm 2 will have the incentive to undercut firm 1 in order to capture the entire market, and then the role is reversed as firm 1 will undercut firm 2, and this will continue. If the

[2] Brewing - Kevin Lawler and Kin-Pui Lee

[3] Datamonitor 2000, pages 120 - 131

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[5] *Economics for Business and Management,* Chrystal and Lipsey, 1997.

firms persist in undercutting each other then this will continue until the price is the marginal cost. Therefore there is an equilibrium at MC = P1 = P2. In the Bertrand model consumers can enjoy perfect information and no transaction costs, and the barriers to entry act as a safeguard with respect to the competition. The modern approach in an oligopoly is through game theory rather than competitive pricing.

Another solution to the oligopoly competition problem is the Cournot (1938) solution. Unlike the Bertrand model, where the duopolist takes the price as given, in the Cournot model he takes the quantity as given.