Klick
Antitrust
Final Exam
Summer 2013

You may use your casebook, notes, and commercial outlines in the completion of this exam, but you may not confer with anyone else about it during the period June 14-June16. You have 24 hours to complete the exam starting once you download it (though it must be submitted by 11:59 pm on June 16). Each question (1, 2, and 3) is equally weighted subject to your choice in question 4. Good luck.

1. Assume the (annual) market demand curve for a product is given by Q = 310 – 0.1 p and marginal cost is constant at 10.

   a. What are the equilibrium market price and quantity in this market if it is perfectly competitive?

In a competitive market, P = MC. So, P = 10 and Q = 310 – 0.1(10) = 309.

   b. What is the equilibrium price and quantity if there is a single monopoly producer and there are complete barriers to entry?

A monopolist sets MR = MC. Revenue = P*Q = (3100 – 10Q)*Q = 3100Q – 10Q^2. MR = 3100 -20Q. Setting MR = MC, 3100 – 20Q = 10, Q = 154.5 and P = 1555.

   c. Assume that each additional firm (beyond the monopolist discussed in 1.b) must pay an annual fee of $1000 to enter the market after which all firms paying the fee and the original firm (the former monopolist) act as Cournot oligopolists. How many firms will enter the market and what will the equilibrium price and quantity be?

One way to start thinking about this is to ask yourself whether you would pay $1000 to make a profit > $1000 (yes) and would you pay $1000 to make a profit less than $1000 (no). So firms will enter until profits cease to exceed $1000. Profit is P*q-C*q. Cournot competitors will set price according to
$$p = \frac{a + Nc}{N+1}$$ **and q according to** $$q = \frac{a - c}{b(N+1)}$$ **so** $$p * q = \frac{3100 + 10N}{N+1} * \frac{3100 - 10}{10(N+1)}$$ **and**

$$C * q = \frac{3100c - c^2}{10(N+1)}.$$ **You could solve for N such that profit =1000 or you could (perhaps more easily)** plug these into a spreadsheet and look at all the possibilities for various values of N. Assuming we don't allow fractional firms, you'll see that in either approach, N=29 provides a per firm (pre fee) profit of $1060.90 while N=30 provides a profit of $993.56, so firms will stop entering once there are a total of 29 firms in the market (i.e., 28 new firms will pay the fee to enter) leading to a equilibrium price of $113 and a total market quantity of 29*10.3 = 298.7.**

   d. In 1.c above, in the absence of any antitrust enforcement, would (or *should* if the only goal is to maximize profits) the original monopoly firm pay other firms to stay out of the market? If so, what offer would it make?

While you might be tempted to calculate the original firm's profits and calculate some fee based on that, there is presumably no way to keep another firm from entering (unless you pay it too) and so on; thus there is no benefit to the original firm with respect to paying some other firm to stay out of the market.

      e. Calculate the deadweight loss arising from monopoly pricing in 1.b and from oligopoly pricing in 1.c. Intuitively, why are they different?

DWL = 0.5(difference in Q relative to perfect competition)(difference in P relative to perfect competition)

DWL(Monopoly) = 0.5(309 – 154.5)(1555 – 10) = $119,351.25
DWL(Oligopoly) = 0.5(309 – 298.7)(113-10) = $530.45

In the oligopoly setting each firm has an attenuated incentive to internalize the price effect from increasing output, leading to more total output and lower prices. As N goes up, we get closer to the competitive outcome (i.e., DWL = 0). The monopolist, on the other hand, fully internalizes the price effects of increasing output.

2. Slotting fees are payments made by manufacturers to retailers often to induce retailers to provide better display locations in a store and more in-store display advertising.

      a. Provide a hypothesis (hypotheses) regarding how such payments could reduce consumer welfare and the intuition behind it.

Slotting fees create a barrier to entry since they make a given market less attractive than other alternatives, leading to less entry, leading to higher prices and lower output, creating a deadweight loss. Most hypotheses will be some version of this story.

      b. Provide a hypothesis (hypotheses) regarding how such payments could increase consumer welfare and the intuition behind it.

Retailers will not generally reap all the benefits of increased sales and therefore they will provide suboptimal levels of advertising, service, display information, etc. If slotting fees are used to mitigate this, and said advertising, service, display information etc reduces consumers' information costs, consumer welfare can increase. Most hypotheses will be some version of this story.

      c. What analyses/evidence would be useful in distinguishing between the hypotheses offered in 2.a and 2.b?

The most basic inquiry here is whether the quantity sold is higher or lower in the presence of slotting fees. If slotting fees are a barrier to entry, the fee-paying firms will reduce output to increase price and therefore profits. If, instead, slotting fees mitigate some information problems, we would expect sales to increase. There are other analyses/evidence that could be useful here, but the quantity question is probably the most important (and almost surely the most feasible).

3. Some products, such as cigarettes, arguably create externalities (i.e., costs or benefits that accrue to third parties who do not purchase the product). In the presence of externalities, should we allow some kinds of producer behavior that would otherwise be illegal under antitrust law? Present both the case for and the case against treating these products differently both from a legal and an economic perspective.

Negative externalities can be viewed as an unpriced input to production. Because the producer ignores this cost of production (because it accrues to third parties not involved in the transaction), output will generally exceed the socially optimal (on an allocative efficiency basis) level. That is, some units are sold where the joint benefit to the consumer and the producer is less than the total social cost of producing the unit. Anti-competitive behavior involves restricting output to raise prices. In the case where there are no negative externalities, this leads to deadweight loss because there are some consumers who value the good more than its marginal cost but less than the monopolist's price. In a sense, in the presence of negative externalities, the monopolistic behavior could mitigate (perhaps even eliminate) these social losses. The over-production due to the externality could be canceled out by the under-production of the monopoly.

As a legal matter, arguments like this are unlikely to get very far given the way US courts have generally insisted that the role of US antitrust law is a narrow one, preferring to rely on other regulators to handle problems that could be ameliorated via competition law but do not arise due restraints of trade. Even though a generic consumer welfare approach might favor using competition law in this way, the courts have generally suggested they are not authorized to engage in these kinds of analyses.

4. Choose one of questions 1, 2, or 3 (inclusive of subparts) above to count double or choose to have each question count the same (i.e., multiply your point total for each question by 4/3). If your choice is not clearly noted, you will automatically lose 25% of the available points on the exam.