Problem Set 11

1. (10%) Selling life insurance to senior citizens is a business with an enormously powerful adverse selection problem: People who are ill or in poor health sign up for this sort of insurance. A natural response to this, used extensively by insurance companies, is to require a physical examination before insurance is sold.

   You have probably seen TV advertisements for life (or extended care) insurance, marketed for senior citizens, that proudly proclaims that np physical exam is required and "you cannot be turned down". These policies sometimes charge premiums that depend on the individual's age, gender, weight, and so forth. Still, they would seem to be prime candidates for problems with adverse selection. So how do they cope? If you read the fine print, you discover that "benefits are drastically reduced for the first two years of the policy". What is the point of this?

2. (10%) Suppose you have been planning to open a health club. Consumers have been burned in the past because a few of these clubs have closed abruptly without refunding unused members hips. You know that consumers are wary of joining a new health club. Evaluate whether the following policies will overcome the problem of consumer wariness.

   a) Raising the price of a membership to obtain a premium price.
   b) Prohibiting the sale of lifetime memberships.
   c) Starting a trade group with local and nationwide clubs and extending reciprocal privileges to individual members. If a club goes out of business, the members may use the facilities of another club. What kinds of problems would you face if you joined such a club? Would you place any restrictions on reciprocity?
   d) Investing in health equipment with your own distinctive label on the equipment.

3. (10%) A firm in Silicon Valley develops a new technology that allows broadcasters to target specific commercials to specific houses. For example, during a commercial break in an Indians Game, the Smith household could receive one commercial, while the Jones household received another more suited to their interests, thus effectively reducing the cost of mass advertising. It is expected that this new system will reduce the incentives for resale price maintenance. Explain whether you agree or disagree with this statement.

4. (10%) Suppose you are trying to determine whether a lemons problem exists in the market for used pickup trucks. Explain why each of the following tests would or would not reveal a lemons problem.

a) The percentage of pickup trucks that trade in the first year.
b) The percentage of trucks sold to dealers by the original owners is increasing over time.
c) The maintenance cost of trucks after they are sold by the original owners is greater than the maintenance costs of trucks that original owners retain.

5. (5%) Cashiers at a restaurant should earn no more than do waitresses. The hours are the same, and the stress if anything is less. All they have to do is sit there and watch over the cash resister. Explain whether you agree or disagree with this statement
6. (10%) You have invented a new home burglar alarm system. You plan to franchise the system to independent retail outlets. Customers purchase alarm systems infrequently, and so they have little information. You are fearful your franchisees will strive for short-term profits. While you should try to monitor the installations of individual franchisees, it would be very expensive. Assume that the retailers are price-taking firms and use the Klein-Leffler theory to explain how many franchises you would issue to prevent cheating.
7. (15%) Used car dealers are faced with the following problem. There are two types of used cars: gems and lemons. Buyers are willing to pay $8,000 for gems and $5,000 for lemons. Sellers of lemons want $3,000, while the sellers of gems want a minimum price of $6,000. Half of the cars offered for sale are gems and half are lemons. The sellers know which cars are gems and which are lemons, but the buyers and the dealer do not.
    (a) Assuming that neither the dealer nor the buyers of used cars can tell a gem or lemon apart, what will gems sell for in the used car market? What will lemons sell for? (You may ignore any costs of operating the used car business beside the costs of cars offered for resale).
    (b) A test is developed that flawlessly tells a gem from a lemon. The test, which costs nothing, is widely known. Any owner can run the test (though buyers cannot). An owner can easily offer to sell his car enclosing a certified copy of the test. The certification is an infallible sign of whether the car is a gem or a lemon. Assuming that every auto seller provides the test, what would then be the price for gems and lemons?
    (c) Assume now that the test costs $50. What will happen to the price of gems and lemons?

(d) Do you think there would be benefits in a law requiring all sellers to provide a copy of the test? And, if there were no such law, do you think all sellers would provide the test? (Remember that sellers know whether they have a gem or lemon. The problem is satisfying the curiosity of the buyer).

8. (5%) Explain why you would expect a higher percentage markdown for imported goods than for domestically produced goods, other factors being constant.
9. (5%) Explain why you would expect the percentage markdown to be lower for men's white shirts than for striped shirts.
10. (5%) A student of men's dress shirts found that the average initial price for shirts not sold on sale was $29.24 and for those subsequently sold on sale, $34.89. Present an explanation for these findings.
11. (5%) Sellers of mansions often have more difficulty selling their houses than sellers of standardized tract housing. Sellers of mansions often have to reduce the initial price to sell the mansions. Can you explain why mansions take longer to sell and why the average markdown on mansions is higher than the average markdown on tract housing?
12. (10%) The Keith-Leffler model implies that you should not pay more to deal with a firm with a good reputation. Explain whether you agree or disagree with this statement.