

Information

Participate in Auction Experiments

The social science experimental laboratory (SSEL) is currently running a series of experiments commissioned by the Federal Government to study the feasibility of using auctions to sell bandwidth for advanced wireless systems (AWS).

You would be a bidder in the auction and earn money based on your own and others' bidding strategies. All money you earn will be paid to you in cash. In addition, you will receive a show up fee.

Each experiment lasts about 2 hours and you can participate in more than one experiment. While earnings cannot be predicted they are usually in the range of **\$25 - \$50**.

- 1: Go to <http://www.ssel.caltech.edu>
- 2: Register (if you haven't done so already)
- 3: Sign up on our calendar page
- 4: Participate (Baxter 5) and get paid in cash!

Robert Thornton, a professor of economics at Lehigh University in Bethlehem, PA, has compiled a list, the Lexicon of Inconspicuously Ambiguous Recommendations, of useful phrases for letters of recommendation on marginally qualified or unqualified candidates. Thornton's AEA listing gives his specialty as Public Employee Bargaining.

Some examples from LIAR:

- For a lazy candidate: In my opinion, you will be very fortunate to get this person to work for you.
- To describe a person who is totally inept: I most enthusiastically recommend this candidate with no qualifications whatsoever.
- To describe an ex-employee who had problems getting along with fellow workers: I am pleased to say that this candidate is a former colleague of mine.
- To describe a candidate who is so unproductive that the job would be better left unfilled: I can assure you that no person would be better for the job.
- To describe a job applicant who is not worth further consideration: I would urge you to waste no time in making this candidate an offer of employment.
- To describe a person with lackluster credentials: All in all, I cannot say enough good things about this candidate or recommend him too highly.

Market for Lemons

- Quality q of cars uniform on $[0,1]$
- Seller values car at q
 - q known only to seller
- Buyer at $3q/2$
- Given price p , sellers with cars $q \leq p$ willing to sell, with average quality $1/2 p$
- Buyers value such cars at $3/4 p < p$
- Information asymmetry prevents market from opening

Myerson-Satterthwaite

- Satterthwaite Caltech graduate
- Buyer value $v \sim U [0,1]$
- Seller cost $c \sim U [0,1]$
- Mechanism to arrange trades efficient if trade occurs when $v > c$

Efficient Trade

- Under efficient trade, GFT are

$$\int_0^1 \int_0^v v - c \, dc \, dv = \int_0^1 \frac{v^2}{2} \, dv = \frac{1}{6}$$

- Mechanism charges buyer $p(v,c)$.
- Buyer obtains $u(r,v) = vr - E p(r,c)$

Buyer Profits

$$\frac{d}{dv}u(v, v) = u_1(v, v) + u_2(v, v) = u_2(v, v) = r \Big|_{r=v} = v.$$

- Thus buyer profits are

$$\int_0^1 u(v, v)dv = -(1-v)u(v, v) \Big|_{v=0}^1 + \int_0^1 (1-v)v dv = \frac{1}{6}$$

- All the gains from trade go to the buyer!

Myerson-Satterthwaite

- Seller also gets all GFT (similar argument)
- Efficient trade impossible
- Buyers tend to understate actual value to improve terms of trade
- Sellers tend to overstate costs
- Result is failure to trade efficient
- Effect is small in large markets
 - Potentially large in small markets
- One way to have inefficient trade is delay



Signaling

Education

- Two types A, B
- Productivity of A higher than B
- If known, types get wages $w_A > w_B$
- Types hard to observe
- Signaled with education: obtaining education level q costs type i $c_i q$

Level Needed to Signal

- If Q such that
$$w_A - c_A Q > w_B > w_A - c_B Q$$
- education level Q will serve to signal that person is type A
- Type A's rationally choose to signal, type B's choose not to signal
- Costly information transmission

Examples

- Banks, insurance companies build enormous buildings
- Warranties
- Designer labels
- Introductory offers

Introductory Offers

- Low enough so that sale is profitable *only* if there is repeat business
- Problem: low price may signal low quality, or create expectations of low prices
- Solution: visibly spend money ("burning money")

Some Products with Introductory Offers

- Celtic sea salt
- Artery cleaner
- Rainforest preservation
- Business ethics
- Geese repellent
- Bulk plankton

Other Signaling

- Entry deterrence
 - Chain store paradox
 - Low price signals low cost, bad market
 - Low prices deter entry
- Failure of complementary good
 - Cannot detect source of failure
 - Solutions: bundling, education
- Union/management signaling patience in a strike
 - Management signals low profits

Segway and Solotrek


