ECON 522 - DISCUSSION NOTES ON TORT LAW-2, LEGAL PROCESS-1

1. Strict Liability for Businesses

Usually strict liability leads to efficient precaution by injurers, but too little precaution by victims. However, if victims are customers of a business and the business is the injurer, then the market can actually force efficient precaution (in the form of activity levels) via prices.

Example 1- My New Bandsaw. Suppose I'm deciding whether or not to buy a new bandsaw for $500. I think I'd like to build things, and I decide I value the saw at $700. However bandsaws are dangerous, and there's a chance that over the lifetime of the saw I'll cut off one of my fingers. Suppose there's a 1/100 chance that this will happen, and if it does then it costs me $60,000.

1. If I know that there's a 1/100 chance I'll cut one of my fingers off, what is the true cost of the bandsaw if I choose to purchase it? Is it efficient for me to buy it? Will I buy it if the remedy is simple negligence (assuming the firm is not negligent)?

2. Suppose I do not perceive this risk. Will I buy the saw for $500? What would happen in a competitive market if the law were changed to strict liability and all other consumers have the same cost/probability of a lost digit?

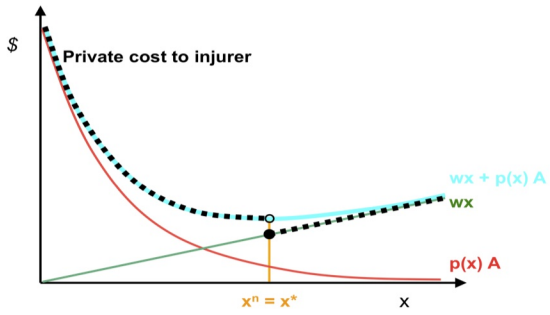
2. Errors in Tort Remedies

We've introduced two types of remedies for torts: strict liability and negligence. Under either rule, the court must decide what to set damages D at, and it may make mistakes. The two types of errors in setting D are:

1. Random Errors: The court may make mistakes, but on average damages are set correctly (equal to actual harm done)

2. Systematic Errors: The court consistently sets damages too high or too low (above or below actual harm done).

For strict liability, random errors have no effect, since all that matters is expected damages. However, systematic errors will lead to either too much precaution (if damages too high), or too little precaution (if damages too low). What's more subtle is the effects of the errors for negligence rules. The graph below is the social and private costs of precaution.



Because of the discontinuity in the private cost function, small errors in setting D have no effect on behavior. However, random errors in setting x^n will tend to make people take more precaution (risk averse), while systematic errors in setting x^n will lead to people taking the inefficient level of precaution x^n.

Story: Imagine you're driving through a new town and you're not sure how fast you can drive without getting pulled over. You know that on an average road you would be able to drive 10 mph over the speed limit, but because you're unsure about the actual value where you are you will likely drive more slowly than you normally would. Thus you take more precaution when there is a random "error" in setting x^n. Now suppose you know you have to drive exactly the speed limit to avoid being pulled over, and if you speed a ticket is \$100. If the cost of driving the speed limit is less than \$100 (the benefit of speeding is less than \$100), say \$75, then you won't speed. However you also wouldn't speed if the ticket were \$80, or if it were \$800. Thus, since damages are never paid if you take precaution, and since there is some discontinuity in the private cost function, there is some range of efficient damages for negligence rules.

3. Legal Process 1

Much of the discussion in the legal process section of class has to do with avoiding trials. Trials themselves are a social cost: some money may be transferred from one party to another, but it would certainly be more efficient if the same money were transferred without ever having to go to trial. Therefore we may be concerned with pre-trial bargaining.

Example 2- I'm Going to Sue You. Suppose you hit me with your car and I decide to sue you for damages. Suppose we both know that you were indeed at fault, and that if we go to trial the court will award me $10,000 in damages. Furthermore, if we go to trial, you have to pay costs of $5,000, and I have to pay $3,000 (these include all costs associated with going to trial, e.g. lawyer fees, court fees, missed wages, etc.). We are able to bargain over a settlement to avoid going to court. If we agree on a settlement we each only have to pay $1,000 in costs.

1. What are each of our threat points in this bargain?
2. What are the potential gains from trade?
3. If we split the gains from trade evenly, what are the final payoffs?

Solutions in class/on next handout.

Solutions to Example 1- My New Bandsaw.

1. The actual social cost of the bandsaw is the price a pay plus the expected cost of my lost finger. This is:

   $$\$500 + \frac{1}{100}(\$60,000) = \$1,100$$

   Since the cost of $1,100 is greater than the benefit of $700 t is not efficient for me to buy this saw. If the remedy is simple negligence, then I can infer that if I cut my finger off then I must pay that $600 expected cost in addition to the $500 I spend on the saw, and thus I won't buy it (which is efficient).

2. If I do not perceive the risk, then I think the true cost of the saw is $500, and I purchase it because I believe that my private cost is less than my private benefit ($\$500 < \$700$). However, if the market is competitive and the rule is strict liability, then firms will be forced to raise the market price from $500 to $1,100. Why: Firms in a competitive market produce until the price equals marginal cost. The marginal cost before the change to strict liability was $500, after the rule change, firms know that if there's an accident then they have to pay damages. The expected cost of these damages per machine sold is $600. If any firm sells a machine for less than $1,100 then it earns a negative profit, and if any firm charges more than $1,100 then no one buys from it, since there are other firms charging $1,100. Therefore, under strict liability the price is $1,100, and I don't buy the bandsaw even though I do not realize that there is any risk of cutting off one of my fingers. Also note, the only people who do buy bandsaws are those whose value is greater than $1,100, who are exactly the people we want to own saws for efficiency.