

Econ 522 Review Session

Topics:

* Efficiency (What is it? How do we evaluate whether private agents achieve efficiency?)

* Bargaining (How are payoffs established? How to figure out bargaining outcome?)

* Property law

- Normative Coase vs. Normative Hobbes

- Efficient remedies

* Contract law

- Bargain theory (When to apply it? How to check?)

- Damages (ED, OD, RD)

- Efficient breach / Reliance / investment in performance

- Unite knowledge and control

* Tort law

- The Hand rule (What is it trying to measure?)

- Accidents between seller & its customer

* Criminal law

- Social costs

- Marginal cost of deterrence

* Others

- Hindsight bias

- Self-serving bias

Efficiency

① What is the efficient outcome?

$$\max SS \Leftrightarrow \max (SB - SC)$$

$\frac{1}{\text{social}} \quad \frac{1}{\text{social}} \quad \frac{1}{\text{social}}$
surplus benefits costs

SB: Value generated to the society

SC: Value destroyed within the society

e.g. Eff reliance

Promisor + promisee

SB: Value generated from reliance to the society

↳ promisor's benefits from reliance

SC: Value destroyed from reliance within the society

↳ costs of reliance

eff reliance is chosen by solving

$$\max_{\text{level of reliance}} (SB - SC)$$

② What do private agents actually do?

$$\max PS \Leftrightarrow \max (PB - PC)$$

$\frac{1}{\text{private}} \quad \frac{1}{\text{private}} \quad \frac{1}{\text{private}}$
surplus benefit costs

PB: benefits to a private agent

PC: costs to a private agent

Ex. Reliance

PB: promisee's benefits from reliance

PC: how much promisee needs to pay for reliance

Promisee chooses reliance level by solving

$$\max_{\text{level of reliance}} (PB - PC)$$

Bargaining

From sample exam questions

Ann's uncle dies and leaves her a beautiful 1959 Corvette in flawless condition. Having no interest in old cars, Ann agrees to sell it to Betty for \$25,000, a fair price given the condition it's in.

Not wanting such a beautiful car to get snowed on, Betty pays \$1,000 to rent an indoor parking space close to her home. This reliance is both efficient and foreseeable, and the \$1,000 is not refundable. From having the car and the parking space, Betty expects to get a benefit of \$40,000.

Two days before Ann and Betty meet to exchange money and keys, Carol hears about the arrangement, and offers Ann \$50,000 for the car.

Two ways to establish payoffs

(a) Based on amount of money

(b) Based on amount of value generated / lost

Under (a)

Ann's payoff if selling to Betty: \$25,000 ↑ Diff = \$25,000

Ann's payoff if selling to Carol: \$50,000 ↓

Under (b)

Ann's payoff if selling to Betty: 0

$$\begin{aligned} \text{Ann's payoff if selling to Carol: } & \$50,000 - \$25,000 \\ & = \$25,000 \end{aligned}$$

Diff =
\$25,000

⇒ Doesn't matter which way you go with,
as long as you're consistent!

If Ann & Betty bargain so that Ann can sell to Carol

(1) Threat points: reservation payoff w/o bargaining

$$\left\{ \begin{array}{l} \text{For Ann: } \$25,000 \\ \text{For Betty: } \$40,000 - \$25,000 = \$15,000 \end{array} \right.$$

↖ \$1,000 parking rental is sunk

(2) Gains from coop: diff in combined payoff, pre & post
bargaining

$$\text{Combined payoff}_{\text{pre}} = \$25,000 + \$15,000 = \$40,000$$

$$\text{Combined payoff}_{\text{post}} = \$50,000 + 0 = \$50,000$$

$$\Rightarrow \text{gains from coop} = \$50,000 - \$40,000 = \$10,000$$

(3) Evenly split

Payoff to Betty after bargaining

= Payoff to Betty after bargaining

$$0 + S = \$15,000 + \frac{\$10,000}{2}$$

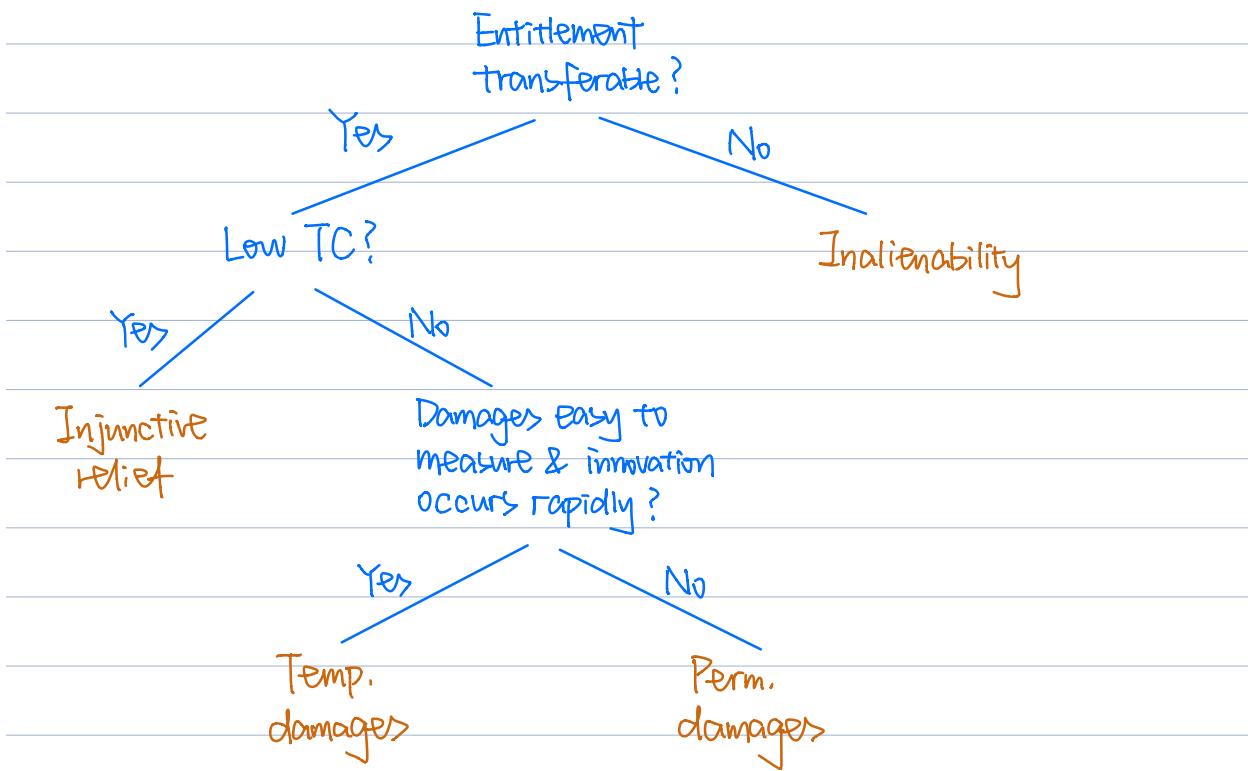
$$S = \$20,000$$

Property Law

① Normative Coase vs. Normative Hobbes

	When to use?	Goal?
Norm. Coase	low TC	Further ↓ TC to facilitate bargaining
Norm. Hobbes	high TC	Assign rights efficiently to begin w/

② Eff remedies?



Contract Law

① Bargain theory

} offer
acceptance

consideration \Leftarrow Both sides need to give up something
to the other

② Damages

Promisee's payoff w/o perf + ED

= Promisee's payoff w/ perf

Promisee's payoff w/o perf + OD

= Promisee's payoff w/ perf of next best

Promisee's payoff w/o perf + RD

= Promisee's payoff before signing

③ Breach / Investment in perf / Reliance

Paradox of compensation:

(a) If ED includes benefits from reliance

\Rightarrow Eff breach & Eff investment in perf

\Rightarrow Over-rely

(b) If ED excludes benefits from reliance

\Rightarrow Over-breach & Under investment in perf

\Rightarrow Eff Reliance

④ Unite knowledge and control

↳ most of the contracts does this

Counterex. Hadley vs. Baxendale

Tort Law

① The Hand rule

$$B < \underline{P \times L}$$

$\overbrace{\quad}^{\substack{\text{social costs} \\ \text{of precaution}}}$ $\overbrace{\quad}^{\substack{\text{social benefits} \\ \text{of precaution}}}$

$$W < \underline{-P'(X) \times A}$$

$\overbrace{\quad}^{\substack{\text{marginal SC} \\ \text{of precaution}}}$ $\overbrace{\quad}^{\substack{\text{marginal SB} \\ \text{of precaution}}}$

② Accidents between seller & its customers

When is customer's activity level efficient?

↳ customers correctly perceive the risk, or
business is strictly liable

Criminal Law

① Social costs

Costs of crimes committed A
Costs of detection / catching criminals B
Costs of trying & punishing criminals caught C

② Marginal costs of deterrence

$$= \frac{\Delta(B + C)}{\Delta \text{ of } \# \text{ of crimes committed}}$$

"The marginal cost of deterring another crime could be positive or negative"

- Social cost of each crime: \$10,000
- Cost of trial and punishment: \$100,000
- Increase fraction of crimes detected from 15% to 20%
- (a) Suppose this increase in detection would result in a decrease in the number of crimes committed from 1,000 a year to 700 a year.
 - i. Calculate the effect that hiring the new policemen would have on the social cost of crimes committed.
before: $1,000 \times \$10,000 = \$10,000,000$
after: $700 \times \$10,000 = \$7,000,000$
effect: \$3,000,000 reduction in social cost of crime
 - ii. Calculate the effect it would have on the cost of trying and punishing offenders.
before: $1,000 \times 15\% \times \$100,000 = \$15,000,000$
after: $700 \times 20\% \times \$100,000 = \$14,000,000$
effect: \$1,000,000 reduction in cost of trials and punishment
- From an efficiency point of view, what is the most that the city should be willing to pay for the new policemen?
\$4,000,000, since this is how much social costs are reduced by having higher detection

"The marginal cost of deterring another crime could be positive or negative"

- Social cost of each crime: \$10,000
- Cost of trial and punishment: \$100,000
- Increase fraction of crimes detected from 15% to 20%
- (b) Now suppose instead that the increase in detection would decrease the number of crimes committed from 1,000 a year to 900 a year.
 - i. Calculate the effect that hiring the new policemen would have on the social cost of crimes committed.
before: $1,000 \times \$10,000 = \$10,000,000$
after: $900 \times \$10,000 = \$9,000,000$
effect: \$1,000,000 reduction in social cost of crime
 - ii. Calculate the effect it would have on the cost of trying and punishing offenders.
before: $1,000 \times 15\% \times \$100,000 = \$15,000,000$
after: $900 \times 20\% \times \$100,000 = \$18,000,000$
effect: \$3,000,000 increase in cost of trials and punishment
- From an efficiency point of view, is there any positive amount that the city should be willing to pay for the new policemen?
No – higher detection increases social costs, so even if the new policemen were free, from an efficiency point of view, we wouldn't want them!

Others

① Hindsight bias

↳ once something happens, ppl have trouble assessing how likely it'll happen beforehand

② Self-serving bias

↳ though both sides have the same info, each side is overly optimistic on the outcome in favor of themselves