

# LAW AND ECONOMICS

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# LAW AND ECONOMICS

## Week 8

### Tort law – basic topics

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#### Structure of the week

- I. Basic issues – legal principles and economic goals
- II. Liability systems
- III. Incentives – care and activity
- IV. Strict liability vs. negligence – why does the rule of strict liability spread?

#### I. Tort law principles

When? Liability (payment of damages) if:

1. the plaintiff suffered a *loss*;
2. the defendant *caused* the loss;
3. the defendant did something *against the law*;
4. (maybe: the defendant was *careless, negligent*)

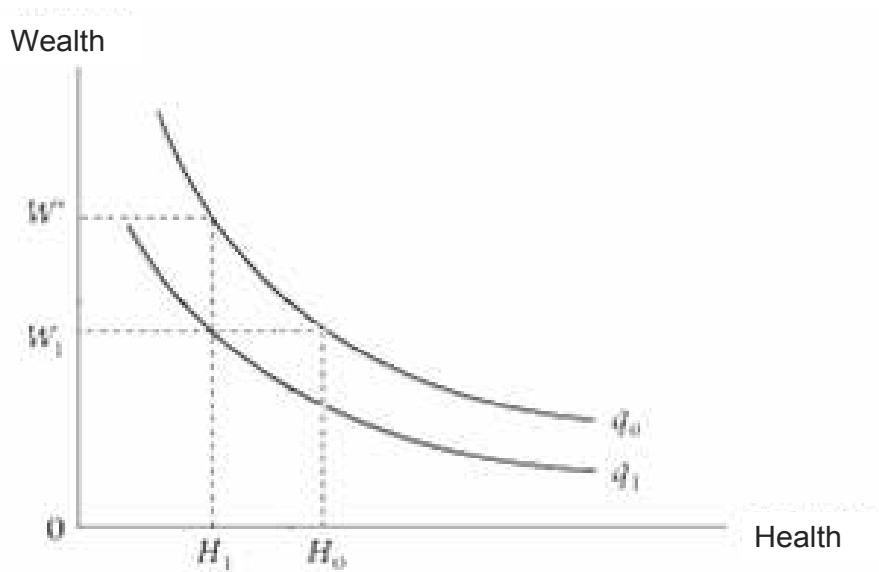
*Against the law*

- Hungarian law: all loss-making (causing loss) is against the law!
- No need to violate a specific rule + otherwise legal actions may be against tort law if they cause a loss (e.g. legal building process – according to all regulations – may be a tort if it causes loss for the neighbours).

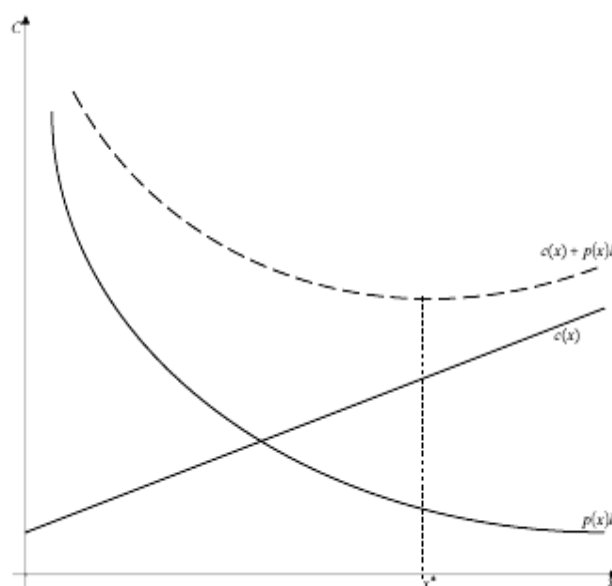
*Causation* (Most important for legal theory)

- Coase: all accidents have two causes – no ex ante victim and injurer.
- Exact question: who should be liable for the accident?
- Economics: incentives (vs. law: reparation) – *ex ante*: who would be the cheaper risk-bearer?

## I. Principles: Loss



## I. Principles: Social objective



- Unilateral model:  $x + p(x)L \rightarrow \min$   
From which:  $x^* : p'(x)L = -1$

- Bilateral model:  $x + y + p(x, y)L \rightarrow \min$

From which:  $x^*(y) : \frac{\partial p}{\partial x} L = -1$  and  $y^*(x) : \frac{\partial p}{\partial y} L = -1$

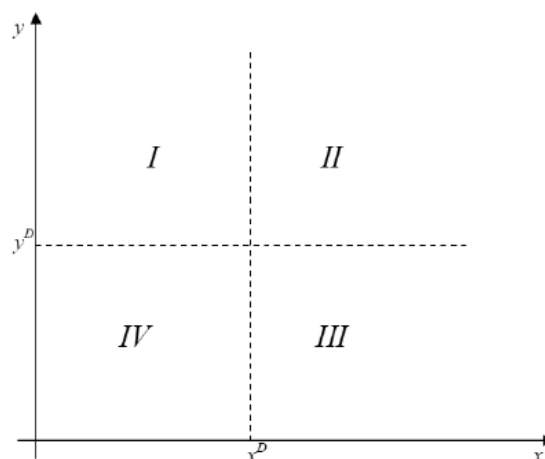
where  $\frac{\partial x^*}{\partial y} < 0$  and  $\frac{\partial y^*}{\partial x} < 0$

Main decisions: when (*liability*) and how much damages?

## II. Liability systems

- Strict liability – always if there is loss.
  - Negligence – only if no due care – defendant did not do everything that a reasonable man would have done in a similar situation [*reasonable man standard*].
- + Role of victim:
- contributory (if negligent, no damages),
  - comparative (if both are negligent, partial damages).

Liability	Loss on injurer	Loss on victim
No liability		I, II, III, IV
Strict liability	I, II, III, IV	
Negligence	I, IV	II, III
Negligence + contributory	I	II, III, IV
Strict + contributory	I, II	III, IV



## II. Liability systems: Hand rule

- *Negligent if:*  
 $B < PL$ , where  
 $B$  is the cost of care (gain from negligence),  
 $L$  is expected loss (what could be avoided in case of due care)
- Judge's logic: what was actually undertaken ( $x$ ) is compared to another level of care (what should have been done,  $x'$ ).
  - Hand rule: negligent IF  $x' - x < [p(x) - p(x')]L$ 
    - If  $x \geq x^* \Rightarrow$  there exists no  $x'$  so that the relation holds
  - No damages because there was due care
    - If  $x < x^* \Rightarrow$  there exists such an  $x'$  that the relation holds
  - If  $x < x^* < x'$ , perhaps court decides injurer was not negligent
  - If  $x < x' < x^*$ , injurer is considered *negligent*
- Consequence: if plaintiff (victim) defines what action the defendant should have taken, he will have an incentive to say that he should have only a little bit more.

## III. Incentives: optimal care

### ***Unilateral: only the injurer can take care***

- Strict liability: private cost  $x + p(x)D \rightarrow \min$   
 $p'(x)L = -1$  IF  $D = L \rightarrow x^D = x^*$
- Negligence: private cost
 

$x + p(x)D$	$x < x^D$
$x$	$x \geq x^D$

IF  $x^D = x^* \rightarrow x = x^*$

**Bilateral model: care of victim also important**

- No liability:  $x = 0$ 
  - Victim:  $y + p(0, y)L \rightarrow \min \quad y^*(0) > y^*(x^*)$
- Strict liability:  $y = 0$ 
  - Injurer:  $x + p(x, 0)L \rightarrow \min \quad x^*(0) > x^*(y^*)$
- Negligence: IF  $x^D = x^*(y^*) \rightarrow x = x^*(y^*)$ 
  - Victim's personal cost function:  $y + p(x^*, y)L$

Social cost = private cost  
because: victim is the *residual risk-bearer*
- *Residual risk-bearer* = who not able to run away from bearing the cost of accident.

### III. Incentives: activity

Basic model: activity = quantity of risky actions (rather than care) – increases the risk of accidents.

- Social:  $w(z,x) - zp(x) L \rightarrow \max$  where:  $\frac{\partial^2 w}{\partial z^2} < 0$   
 assuming:  $z^*(x): \frac{\partial w}{\partial z} - p(x)L = 0$   
 $x^*(z): \frac{\partial w}{\partial x} - p'(x)zL = 0$
  - Residual riks-bearer: private = social cost,
  - No liability:  $p(x)L = 0 \rightarrow \frac{\partial w}{\partial z} = 0 \rightarrow z > z^*(x)$
  - Negligence:  $w(z, x) \rightarrow \max$  Ha:  $x \geq x^*$   
 $w(z, x) - zp(x)L \rightarrow \max$  Ha:  $x < x^*$
- From where:  $x = x^*$  and  $p(x)L = 0 \rightarrow \frac{\partial w}{\partial z} = 0 \rightarrow z > z^*(x)$

- Activity = (more exactly) all actions that affect the probability of accidents, but courts are unable to confirm.

### III. Incentives

- *Care + activity: Both at the same time?*
- Residual risk-bearer: both incentives are optimal.
- Liability systems: different residual risk-bearer + the other party's incentives
  - YES = optimal incentive, given the other party's decisions.

	Residual risk-bearer	Tortfeasor		Victim	
		Care	Activity	Care	Activity
<b>No liability</b>	Victim	No	No	Yes	Yes
<b>Strict liability</b>	Injurer	Yes	Yes	No	No
<b>Negligence</b>	Victim	Yes	No	Yes	Yes
<b>Negligence + contributory</b>	Victim	Yes	No	Yes	Yes
<b>Strict + contributory</b>	Injurer	Yes	Yes	Yes	No

- Paradox of compensation
- Optimal incentives  
 Injurer: strict (damages paid to a third party or the state),  
 Victim: no liability.

### IV. Strict – when and why?

- Strict liability is spreading – e.g. product liability.
- Hungarian law: hazardous activity, product liability (liability of manufacturer), wild animals.
- Pros:
  - information gathering (manufacturer vs. court),
  - optimal incentives for injurer (residual risk-bearer).

- Cons:
  - incentives for victim – contributory system?
  - mitigation (see next week)?
  - cost of changing the level of activity? Substitution?

Landes and Posner's argument for the efficiency of enlarging strict liability:

1. Activity (rather than analysed actions) is more important.
  - Complex technology, dangerous activity (e.g. driving a car)
2. INFORMATION: it is hard to prove the actual care level.
  - *Siegler v. Kuhlman*: after gas-explosion: evidence destroyed
3. BUT: cost of finishing an activity – close substitute products?
  - E.g. no liability (vs. strict) in pharmaceutical industry – permission is enough to prove due care
  - *Guille v. Swan*: balloon incident – fall + rescue team destroys the harvest – beginning of 20 Century: more substitution (why fly?): strict liability. Today: no strict liability for flight accidents.
4. Increased possibility of damages – compensation of victims.
  - E.g. employer's strict liability for loss caused by his agents, employees (due care in selection and control not enough to avoid liability).

## Practice

## Revision

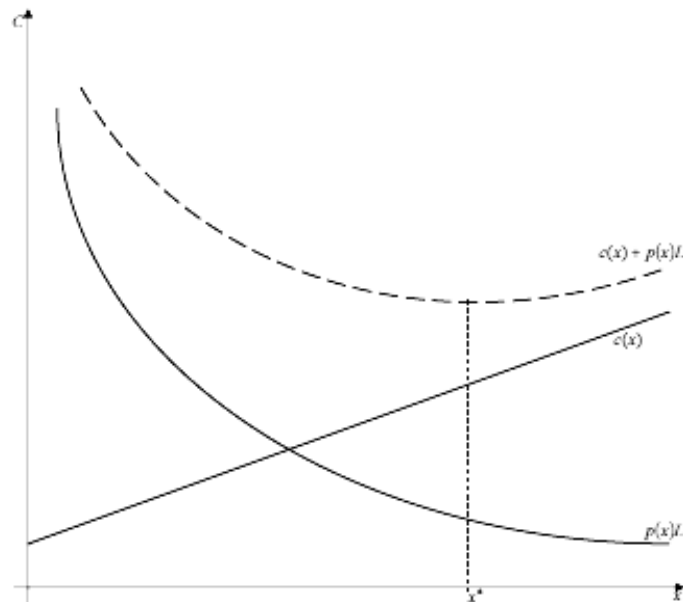
Property vs. liability rule

When liability? IF

1. loss;
2. causation;
3. against law;
4. (negligence)



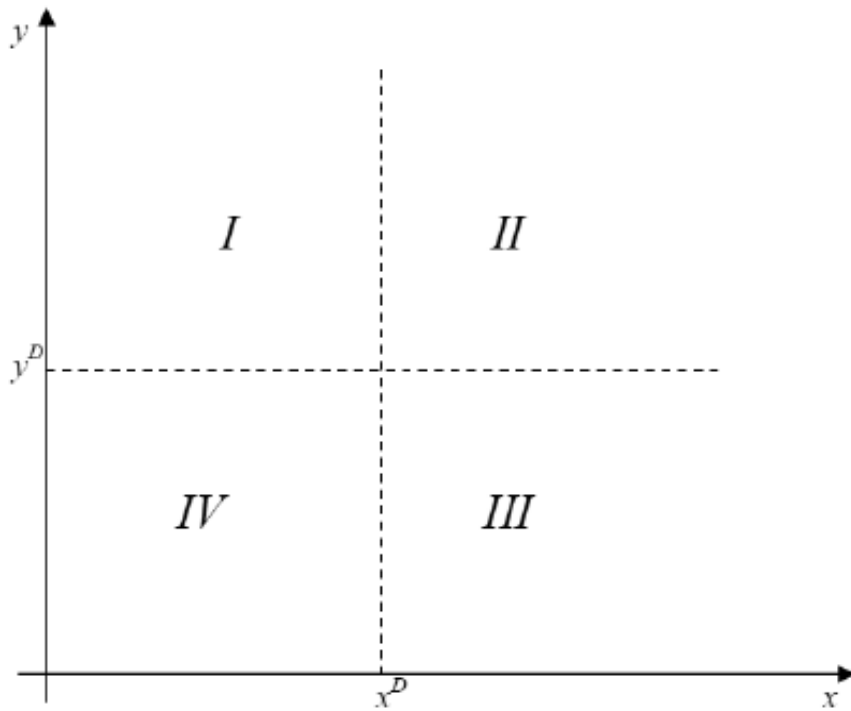
## Revision: social objective?



## Strict liability vs. negligence

- Strict?
  - Injurer always pays, if...
- Negligence?
  - Injurer pays only if no due care (reasonable man standard).
- Hand rule?
- What is the reasonable man standard?

# Liability systems: Who pays?



# Efficiency: which situation – which system?

Kétoldalú

$$L = 100$$

$$p_{NN} = 1,0$$

$$p_{ND} = p_{DN} = 0,5$$

$$p_{DD} = 0,1$$

$$x_i = 10$$

$$x_v = 5$$

Társadalmi optimum

DD

Kártérítés hiánya		
	<u>No</u>	<u>Due</u>
No	100, <u>0</u>	50, 10
<u>Due</u>	<u>55, 0</u>	<u>15, 10</u>

Szigorú felelősség		
	No	<u>Due</u>
<u>No</u>	<u>0, 100</u>	<u>0, 60</u>
<u>Due</u>	5, 50	5, <u>20</u>

Vétkességi felelősség		
	No	<u>Due</u>
No	<u>0, 100</u>	<u>50, 10</u>
<u>Due</u>	5, 50	<u>15, 10</u>

Szigorú + közrehatás		
	No	<u>Due</u>
No	100, <u>0</u>	50, 10
<u>Due</u>	<u>5, 50</u>	<u>5, 20</u>

Vétkesség + közrehatás		
	No	<u>Due</u>
No	100, <u>0</u>	50, 10
<u>Due</u>	<u>5, 50</u>	<u>15, 10</u>

Összehasonlító vétkesség		
	No	<u>Due</u>
No	50, 50	<u>50, 10</u>
<u>Due</u>	<u>5, 50</u>	<u>15, 10</u>

Egyoldalú

(olcsóbb kockázatviselő)

$$L = 100$$

$$p_{NN} = 1,0$$

$$p_{NN} = p_{ND} = p_{DN} = 0,0$$

$$x_i = 10$$

$$x_v = 5$$

DN

	<u>No</u>	<u>Due</u>
No	100, <u>0</u>	<u>0, 10</u>
<u>Due</u>	<u>5, 0</u>	5, 10

	No	<u>Due</u>
<u>No</u>	<u>0, 100</u>	<u>0, 10</u>
<u>Due</u>	5, <u>0</u>	5, 10

	No	<u>Due</u>
<u>No</u>	<u>0, 100</u>	<u>0, 10</u>
<u>Due</u>	5, <u>0</u>	5, 10

	<u>No</u>	<u>Due</u>
No	100, <u>0</u>	<u>0, 10</u>
<u>Due</u>	<u>5, 0</u>	5, 10

	<u>No</u>	<u>Due</u>
No	100, <u>0</u>	<u>0, 10</u>
<u>Due</u>	<u>5, 0</u>	5, 10

	No	<u>Due</u>
No	50, 50	<u>0, 10</u>
<u>Due</u>	<u>5, 0</u>	5, 10

# Incentives

- Care vs. activity?
- Difference: can it be proved?
  
- Care?
- If loss borne by the party – optimal incentives.
  
- Activity?
- Optimal only if full loss is borne by the party.
- Residual risk bearer?
- The party who cannot escape from loss (e.g. through proving due care)