Rafał T. Stroiński “Introduction to Law and Economics”

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THE NINTH LECTURE
“PROPERTY RIGHTS – THE COASE THEOREM AND TRANSACTION COSTS II”
Consider a factory whose smoke causes damage to the laundry hung outdoors by five nearby residents. In the absence of any corrective actions, each resident would suffer EUR 7 500 in damages, a total of 37 500

5 residents x EUR 7 500 damages = EUR 37 500 total damages
Factory Example (Revisited)

The smoke can be eliminated by either of two ways:

- a smokescreen can be installed on the factory’s chimney, at a cost of EUR 15 000; or
- each resident can be provided an electric dryer, at a cost of EUR 5 000 per person
What Is The Outcome Under Zero Transaction Costs?

The factory has three choices:

- pollute and pay EUR 37 500 in damages to the five residents;
- install a smoke-screen for EUR 15 000; or
- purchase five dryers for the residents at a total cost of 5x5 000 = EUR 25 000
The Efficient Solution
(under zero transaction costs)

If there are no transaction costs, the efficient outcome (installing smokescreen at a cost of EUR 15,000) will occur under any legal rule (initial allocation of property rights).

The choice of legal rule will determine who carries the cost of the efficient solution.
Transaction costs

How is the preceding result affected, if there are transaction costs?
Coase Theorem Revisited (with Transaction Costs)

• The polluting factory and the residents example

• Assume that it costs each resident EUR 6,000 to get together with the others (e.g. transportation costs, value of time spent on negotiations) and agree a way to proceed
Coase Theorem Revisited (with Transaction Costs)

• What if the “right to clean air” is allocated to the residents, i.e. they can prevent the factory from polluting?
Coase Theorem Revisited

• The factory will again buy the smokescreen, an efficient solution

• What happens if the factory has the right to pollute?
Coase Theorem Revisited

Each resident has to decide whether:

- bear the losses of EUR 7,500
- buy a dryer for EUR 5,000
- get together with other residents for EUR 6,000 to collectively buy a smokescreen for EUR 15,000

What will a reasonable resident do?
Coase Theorem Revisited

- Each resident will decide to buy a dryer, AN INEFFICIENT OUTCOME (because losses of EUR 37,500 are eliminated with a cost of EUR 25,000 and not with a cost of EUR 15,000)

- SO, GIVEN THE ABOVE TRANSACTION COSTS, THE RIGHT TO CLEAN AIR IS EFFICIENT, BUT THE RIGHT TO POLLUTE IS NOT
Coase Theorem Revisited

• In the circumstances described in the above example, the preferred legal rule ("right to clean air") minimizes the effects of transaction costs

• Under the right to clean air, the factory had to decide whether to pay damages, install a smokescreen or buy five dryers

• BUT – the factory did not have to get together with the residents to decide what to do, so it did not suffer any transaction costs, nor was its decision induced by transaction costs
Coase Theorem Revisited

• Under the right to pollute, the residents had to decide what to do and suffer the corresponding transaction costs

• The residents were induced to choose an inefficient solution in order to avoid the cost of getting together

• This is why the transaction costs in fact were not suffered, but still their effects (the threat of transaction costs) were greater under that rule
Coase Theorem Revisited

• The more complicated version of the Coase Theorem:

• IF THERE ARE POSITIVE TRANSACTION COSTS, THE EFFICIENT OUTCOME MAY NOT OCCUR UNDER EVERY LEGAL RULE

• IN THESE CIRCUMSTANCES, THE PREFERRED LEGAL RULE IS THE RULE THAT MINIMIZES THE EFFECTS OF TRANSACTION COSTS
Coase Theorem Revisited

• What are the distributional consequences of positive transaction costs?
Coase Theorem Revisited

• In a world of zero transaction costs we have established that the choice of the legal rule redistributes income by the amount of the least-cost solution.

• In the world of positive transaction costs in our example, if the “right to clean air” is selected, the factory pays EUR 15,000 for the smokescreen.

• If the “right to pollute” is selected, the residents pay EUR 25,000 for five dryers.
Coase Theorem Revisited

• The real world is full of transaction costs, often very high
• Does the Coase Theorem matter at all?
Coase Theorem Revisited

- Although the simple version of the Coase Theorem makes an unrealistic assumption about transaction costs, it provides a useful way to begin to think about legal problems because it suggests the kinds of transactions that would need to take place in order for a rule to be efficient.

- Once these required transactions are identified, it may be apparent that, given more realistic assumptions about transaction costs, one rule is clearly preferable to another on efficiency grounds.
Coase Theorem Revisited

• In this situation, the more complicated version of the Coase Theorem provides a guide to choosing legal rules

• Can we do something about transaction costs?
Coase Theorem Revisited

• One way of reading the Coase Theorem is that it suggests that the law can facilitate bargaining by lowering transaction costs

• Lowering transaction costs “lubricates” bargaining

• One important way for the law to do this is by defining simple and clear property rights

• It is easier to bargain when legal rights are simple and clear than when they are complicated and uncertain

• Consider the examples below
"Prior tempore potior iure" principle

- An easy mechanism to determine claims in property; Note art. 249 of the Polish Civil Code:

- "§1 If a different number of limited rights in property encumber the same thing, the right in property established later cannot be exercised with any prejudice towards the right in property which was established earlier."
Land and Mortgage Registration System

• Helps decrease transaction costs by lowering information costs and uncertainty as to credibility of information

• Note the Act on the Land Register and Mortgages of 6 July 1982

• Art. 1 of the Act, the Land Register is established in order to determine the legal status of real-property

• Art. 2 of the Act, the Land Register is publicly available and a person cannot claim that he did not know the content of the Land Register or any applications thereto which have been noted in the Land Register

• A number of remaining provisions of the Act establish presumptions regarding the legal status of the real-property for which the Land Register is kept

• On-line access and electronic excerpts to the Land Register
Land and Mortgage Registration System

- All the above provisions of the Act introduce certainty into dealings with real-property, thus lowering transaction costs.

- In particular, this regards the transaction costs related to finding the contracting party and determining his title.

- By acting in good faith and in reliance on the content of the Land Register, the prospective purchaser (mortgagee, etc.) does not have to incur further transaction costs aimed at verifying title to the real-property.
The Normative Coase Theorem

- By lubricating bargaining, the law enables the private parties to exchange legal rights, thus relieving lawmakers of the difficult task of allocating legal rights efficiently.

- This principle can be formalized as THE NORMATIVE COASE THEOREM:

- “STRUCTURE THE LAW SO AS TO REMOVE THE IMPEDIMENTS TO PRIVATE AGREEMENTS”
The Normative Hobbes Theorem

- Besides lubricating bargaining, a legal system tries to minimize disagreements and failures to cooperate, which are costly to society.

- Following the works of Thomas Hobbes, a NORMATIVE HOBBES THEOREM can be stated:

  “STRUCTURE THE LAW SO AS TO MINIMIZE THE HARM CAUSED BY FAILURES IN PRIVATE AGREEMENTS”
Minimizing Harm from Disagreement

• The law should be structured to prevent coercive threats and to eliminate the destructiveness of disagreement.

• When parties fail to reach an agreement, they lose the possible gains from the economic exchange.

• To minimize the resulting harm, the law should allocate property rights to the party who values them most.

• By doing this, the law makes exchange of rights unnecessary and thus saves the costs of a transaction (an efficient solution is where a given good ends up in the hands of the party who values it the most, by way of an exchange on the market).
Art. 169 of the Polish Civil Code

Consider an illustration of forced transfers of movable property in the case of bona fide purchasers. Under art. 169 of the Polish Civil Code:

§1 If a person unauthorized to dispose of movable object transfers that object and hands it over to the purchaser, the purchaser acquires property of the object at the moment of acquiring possession over the object, unless the purchaser is acting in bad faith.
Art. 169 of the Polish Civil Code

• §2 However, if property of an object that has been lost, stolen or otherwise misplaced by the owner is transferred prior to the lapse of three years from the date on which the object was lost, stolen or misplaced, the purchaser can acquire ownership only following the lapse of that three-year period. This limitation does not apply to money and bearer documents, as well as to objects purchased on an official public auction or as part of court execution proceedings.
Art. 169 of the Polish Civil Code

• What is the economic justification for the above rule?

• The rule under art. 169§1 is that a bona fide purchaser will acquire good title once he obtains possession of the object from the person transferring “ownership” of the object, even though that person is not authorized to do so.

• Why is that?
Art. 169 of the Polish Civil Code

• Assume we have the owner – A, who entrusts possession of his watch to B, who in turn by mistake (i.e. excluding theft) sells the watch to C, a bona-fide purchaser

• Two options – we can either decide that A prevails (i.e. C does not get good title to the watch) or that C prevails (C gets good title and A loses title to the watch)

• Consider who is the least-cost avoider of the watch being transferred to C?
Art. 169 of the Polish Civil Code

- The person who can avoid the transfer at least cost is A
- It is A who entrusts possession of the watch to B
- In doing that, A should determine whether B is worthy of being entrusted with possession
- Also, the more value the “thing” (watch) has, the more care A will take to select a trustworthy B, who can get possession of A’s watch
- By the way – B will still “b” liable to A for damages...
Art. 169 of the Polish Civil Code

• Assume you are walking with your hands full – you are carrying a valuable present for your friend in one hand and today’s newspaper in the other hand.

• Suddenly, your mobile is ringing and you need a free hand.

• A person is standing nearby, who is offering to help.

• The problem is that he doesn’t look very convincing – would you give him the valuable present or today’s paper to hold on to for a while?
Art. 169 of the Polish Civil Code

- Assume you were walking with your boyfriend/girlfriend
- You would probably ask him/her to hold on to your possessions, rather than ask an unknown person on the street
- In both of the above cases, you are acting rationally and taking into account the risk of loss
Art. 169 of the Polish Civil Code

• From C’s perspective, if the rule was that in the case of transfers to bona-fide purchasers it is the original owner (i.e. A) who prevails, then C would in each time need to incur significant costs to verify if the seller is authorized to do so.

• When purchasing a refrigerator in the mall, you would need to examine the shop’s contract with the whole-sale supplier and then verify if the serial number on the refrigerator conforms to that listed in the contract and on the documents evidencing transport and receipt of that given refrigerator.
Art. 169 of the Polish Civil Code

• Indeed, assuming that the law does not protect bona-fide purchasers, you would need to examine the whole chain of transfer of the refrigerator, over from wherever the refrigerator was produced in the first place.

• This would make exchange significantly more costly and difficult.
Art. 169 of the Polish Civil Code

- What about §2 of art. 169?

- Suppose B did not sell A's watch by mistake, but stole it from A and then sold it to C, a good-faith buyer, without giving C any reason to suspect that he was buying a stolen watch.

- Supposedly, again A could have prevented the erroneous “transfer” of his watch from A to B (e.g. by taking more care).

- What implications?
Art. 169 of the Polish Civil Code

• Allowing C to obtain good title in the same way as in the previous case (described by art. 169 §1 of the Civil Code) might encourage theft

• If people could get good title to stolen goods, it would bring up the price of stolen goods – simply because a good title is worth more than a “cloudy” title

• We do not want an efficient market in stolen goods, for the simple reason that it would be detrimental to society

• What about the three year waiting period?
C can acquire good title if the stolen watch is sold by B after three years of it being stolen from A (assuming C is still in good-faith at that time)

To some extent, this indeed does provide an incentive for a market in stolen goods to be established

Arguably such a market would still be established if a thief could not transfer title to bona-fide purchasers, but since more risk of the title being questioned would be involved, the market would probably be smaller than in the current situation, where following the three-year waiting period good title can be acquired
Art. 169 of the Polish Civil Code

Another effect of art. 169 §2 of the Civil Code is that a reasonable thief will discount the value of the good he plans to steal by the period of time following which he will be able to sell the good.

In other words, the Present Value of the watch will be smaller than what it is worth with good title to it.

What other factors affect the market for stolen goods?

Why does the Civil Code allow that a good-faith purchaser can acquire good title to stolen goods in the first place?
Art. 169 of the Polish Civil Code

• The purpose is certainty

• The law assumes (rightly or not) that three years is a sufficient time in which the stolen movable goods can either be found (e.g. by the police) or have no chance of being found at all

• In the latter case, it may be better to create a market for them, mostly in order to avoid the purchaser having to incur significant search costs and risks related to tracing the title of the acquired goods
Art. 169 of the Polish Civil Code

• What the law seems to be saying, is that permitting the acquisition of good title to stolen goods following a determined waiting period involves less costs to society, then prohibiting these goods from ever being marketable and imposing significant search costs on purchasers of any goods on the market

• What problem remains?
Art. 169 of the Polish Civil Code

- In theory, the prospective purchaser of goods still needs to incur search costs to determine if the goods he contemplates purchasing have not been stolen in the last three years.

- The three-year waiting period does not apply to stolen money, bearer documents and property acquired on an official auction or during court execution proceedings.

- Why?
Art. 169 of the Polish Civil Code

• In the case of money and bearer documents the main reason is that, again, absent the above exclusion, people would need to incur significant costs to determine if a given note of money has or has not been stolen within the last three years – which is virtually impossible to verify or prove in court.

• Absent the exclusion from the three-year waiting period, people would bring frivolous claims aiming to overthrow performed payments, gambling that they might convince the court about the money being stolen.

• This could endanger many transactions carried out on the market.

• What about actions and court proceedings?
Art. 169 of the Polish Civil Code

- As regards acquiring property on an official auction or during court enforcement proceedings, the argument can be made that first of all search costs regarding title to the goods offered for sale should be carried by the entity organizing the auction or by the court, so that it would be inefficient for the purchaser to incur costs to obtain the same information again.

- Any problems?
Art. 169 of the Polish Civil Code

- Of course, one can say that the court or the organizer of the auction could assume, that because if they sell a stolen good, the purchaser will acquire good title anyway, they have no incentive to incur search costs.

- But, on the other hand, the auction organizer and the court have a strong incentive to keep their reputation.
Art. 169 of the Polish Civil Code

• Note that in the preceding economic analysis of art. 169 of the Civil Code, very often we have reverted not only to the notion of transaction costs, but also to the notion of opportunity cost, mainly by examining what would happen, if the rule were different from that established by art. 169 of the Civil Code.
The Level of Transaction Costs and the Appropriate Legal Rule

- The Coase Theorem holds that the efficient use of resources does not depend on the assignment of property rights in situations of zero transaction costs.

- The assignment of property rights might be crucial to the efficient use of resources when transaction costs are not zero.

- Theoretically, transaction costs might lie along a spectrum between zero and indefinitely large.

- What is the relationship between the level of transaction costs and the appropriate legal rule?
FIGURE 4.2 Different threshold levels of transaction costs, with different views about the appropriate legal rule in property issues.

From: Cooter & Ulen (1998)
The Level of Transaction Costs and the Appropriate Legal Rule

• Any potential transaction can be assigned to some point on the spectrum, depending on our assessment of the level of transaction costs.

• Are these costs low enough for us to let bargaining determine the efficient use of the resources involved or so high that bargaining will fail – so that some alternative to bargaining is required?
The Level of Transaction Costs and the Appropriate Legal Rule

• There will be a threshold level of transaction costs on the spectrum that divides the spectrum into a region in which bargaining will work and one in which it will not

• Reasonable people may have very different ideas about where that threshold lies

• What happens when people have such differing ideas?
FIGURE 4.2 Different threshold levels of transaction costs, with different views about the appropriate legal rule in property issues.
The Level of Transaction Costs and the Appropriate Legal Rule

- The person whose views are shown below the spectrum places the threshold at a lower level of transaction costs, indicated by line R.
- He believes that bargaining will succeed in a smaller number of situations.
- He is therefore, willing to intervene legally in more situations than the person whose beliefs are shown above the spectrum.
The Level of Transaction Costs and the Appropriate Legal Rule

- Deciding issues of efficient allocation of resources:
- Expansive role for unimpeded bargaining v. restrictive role for bargaining
The Level of Transaction Costs and the Appropriate Legal Rule

- Note that the two people agree that legal intervention improves efficiency for all situations in which transaction costs are above line E, and that unimpeded bargaining succeeds for all situations in which transaction costs are below line R.

- The disagreement is about whether bargaining or legal intervention is the more appropriate means of dealing with those transactions that lie between the two vertical lines.
SMOKING EXAMPLE – What should be the appropriate legal rule for dealing with cigarette smoking in restaurants?

- Should restaurants decide for themselves if to permit smoking and how much, or should there be legal regulation of the amount and kind of smoking in restaurants?

- The person who believes that bargaining can succeed in a wider range of situations may be content to let private bargaining between smokers, nonsmokers and restaurant owners handle the matter

- What options?
SMOKING EXAMPLE – What should be the appropriate legal rule for dealing with cigarette smoking in restaurants?

- Smokers can pay nonsmokers to allow them to smoke in restaurants
- Or nonsmokers can pay smokers not to smoke in restaurants
- Either way, the more valuable activity will prevail
- Alternatively, the restaurant owners have an incentive (profit maximization) to efficiently distribute restaurant space between smokers and nonsmokers
- What problems?
SMOKING EXAMPLE – What should be the appropriate legal rule for dealing with cigarette smoking in restaurants?

• Someone else might believe that the transaction costs between smokers and non-smokers in restaurants are so high as to preclude a bargaining solution to their conflicting interests.

• He fears that unpleasant and antisocial behavior will take place between smokers and nonsmokers. The government should not delegate the task of separating these potentially warring parties to bargaining, nor to restaurant owners.

• Rather, the government must intervene and structure a solution. For instance, the government could require restaurants to set aside nonsmoking areas.

• What would you choose?
That's it for this week!