

The Empirical Accuracy and Judicial Use of the Coase Theorem (Vel Non)

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1. Introduction

The aim of this chapter is to comment on two “real world” aspects of the Coase Theorem: what we know about its empirical accuracy, and whether it has influenced the courts.

The Coase Theorem is hard to test because it is hard to define. Coase didn't offer any theorem in *The Problem of Social Cost*;² those who speak of the “Coase Theorem” are summing up an implication of Coase's argument, and they don't always do it the same way. Legal analysts tend to state the Coase Theorem roughly like this: if transaction costs were zero, assignments of rights by the law would not affect where the rights end up and how they are used, and the final allocation of them would always be efficient. The party ready to pay the most for a right will always obtain it, either by receiving it directly from the legal system or buying it from some someone who did. When stated in that way, the Coase Theorem might seem to have empirical content in theory but be impossible to test in practice. The world of *zero* transaction costs belongs to science fiction; bargaining in real life always takes at least a little trouble. But the Theorem also can be stated as the more practical claim that at least when bargaining is easy, we can expect parties to negotiate their way to the same result no matter what the law says.³

2. Real-World Tests

That practical version of the Coase Theorem has been sometimes been tested by examining the behavior of parties in real-world situations. John Donohue, for example, examined an Illinois program to help the unemployed get jobs.⁴ Participants in the program were unemployed workers randomly assigned to two groups. Members of the first group were awarded \$500 by the program if they found a job and kept it for four months. If workers in the second group found jobs and kept them for the same period, their *employers* would receive the \$500. Donohue observed that under the Coase Theorem—or at least under certain accounts of it—the results under the two versions of the program ought to be the

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² 2 J. L. & Econ. 1 (1960).

³ Or see the restatement offered in Richard A. Posner, *Economic Analysis of Law* sec. 3.6: “the initial assignment of property rights will not affect the ultimate use of property if transactions are permitted and not highly costly.”

⁴ John J. Donohue III, *Diverting the Coasean River: Incentive Schemes to Reduce Unemployment Spells*, 99 Yale L.J. 549 (1989).

same. It should not matter which side of the arrangement, employer or employee, stood to gain the \$500; they could bargain over the money in any case. Workers entitled to \$500 if they were hired, for example, could offer that money to a prospective employer in return for a job, which would be as good for the employer as being offered the \$500 by the state. Or employers entitled to the money could offer it as a bonus to potential employees. Donohue found, however, that the two versions of the program produced different results: the money was far more likely to be claimed when the employee was entitled to it.

Donohue's finding need not be considered contrary to the Coase Theorem. One could point out, as was done,⁵ that transaction costs, fully understood, might have been substantial. In a world without transaction costs, perhaps, the unemployed worker and the employer would have perfect knowledge of the program, and either would be able to bring it up without fear of sending awkward signals to the other. In real life, though, information is costly and negotiations are a nuisance or worse. So maybe all Donohue proved was that the transaction costs surrounding the Illinois plan were higher than they looked at first. That is a common line of response to a showing that the Coase Theorem seems not to work: identify possible reasons why the parties did not bargain, and describe those reasons as transaction costs. There is nothing wrong with that line of defense (though in extreme form it can make the Theorem a tautology).⁶ But it turns the debate from an empirical argument into a conceptual one about what should count as a transaction cost and what should not. If our goal is simply to know how readily we should imagine that parties will bargain around their entitlements, Donohue's study is a legitimate cautionary tale. Whether the study is interpreted as undermining the Coase Theorem or as confirming it (and as reminding us that transaction costs come in many subtle forms), is on this view neither here nor there.

Another study, conducted by the author of this essay, examined twenty nuisance cases that were litigated to judgment.⁷ I asked the lawyers for both sides whether the parties bargained after the case was over and whether they thought there would have been bargaining if their cases had been decided the other way. As it turned out, there was no bargaining after judgment in any of the cases and none of the lawyers thought bargaining would have occurred if the outcomes in court had been reversed. Of course the sample size was modest, and the lawyers were speculating about counterfactuals. Maybe the courts in every one of the nuisance cases assigned the rights to the side that valued them more, obviating the need for bargaining—and when the lawyers said there would have been no bargaining if the outcome had been different, they could have been wrong. Still, the uniformity of the results is striking. The lawyers consistently asserted that

⁵ Robert C. Ellickson, *The Case for Coase and Against Coaseanism*, 99 *Yale L.J.* 611 (1989).

⁶ On which see Daniel A. Farber, *Parody Lost/Pragmatism Regained: The Ironic History of the Coase Theorem*, 83 *Va. L. Rev.* 397 (1997).

⁷ Ward Farnsworth, *Do Parties to Nuisance Cases Bargain After Judgment? A Glimpse Inside the Cathedral*, 66 *U. Chi. L. Rev.* 373 (1999).

enmity between the parties, or their disinclination to treat their rights as bargaining chips, made any bargaining a waste of time after the court made its decision.

The significance of the study can be attacked on other grounds. One is that the sample of disputes under consideration—those litigated all the way to judgment—skews the results. *Of course* parties who have fought long and hard with each other will be in no mood to bargain once the case is over; only parties who were mad at each other, or who didn't like bargaining, would let a neighborly dispute about a nuisance last so long in the first place. Surely more ordinary parties and their lawyers would consult the outcomes of earlier cases, determine their rights, and bargain from there in Coasean fashion—probably without ever filing a lawsuit, let alone litigating to the bitter end. Much of this may be true; the behavior of parties who settle early has not been studied in the same way. But in any event, Coase talked directly in his article about what to expect of parties who litigate nuisance disputes to judgment. In truth he may not have cared much about that situation; it was just an example to illustrate his argument. But in that event he may not have chosen a very good example. And as Coase appreciated better than most, bad examples—the kind that sound right when offered from an armchair but aren't really accurate—can have unfortunate consequences.⁸

A different interpretation of the nuisance study is that, like Donohue's, it is quite consistent with the Coase Theorem. It merely shows that transaction costs in nuisance cases are higher than might have been thought. The parties hated each other, or regarded their rights as poorly commensurable with cash, and both of these can be considered obstacles to rational bargaining. This claim sets the stage for another debate about what counts as a transaction cost. That debate would be best resolved by asking why we care. If "high transaction costs" are treated as a reason for courts to award damages rather than injunctions as remedies at the end of a case, then we would want to consider whether hatred between the parties is a good reason to deny one of them an injunction against the other. That's an interesting question, but it changes the subject.⁹ As in Donohue's study, the *empirical* point is reasonably straightforward: at least with respect to parties who litigate to judgment the kinds of cases that Coase talked about, bargaining is probably less likely in practice than he imagined. It may well be higher among corporate parties involved in matters with higher stakes, such as disputes about the validity of patents. Those situations are entitled to their own studies, and have not yet received them.

Finally, Robert Ellickson studied the real-life handling of another situation that Coase used as an example: conflicts that arise when animals owned by a rancher eat crops that are owned by a farmer next door.¹⁰ Coase's argument

⁸ See Ronald H. Coase, *The Lighthouse in Economics*, 17 *J. Law & Econ.* 357 (1974).

⁹ The issue is discussed in Ward Farnsworth, *The Economics of Enmity*, 69 *U. Chi. L. Rev.* 211 (2002).

¹⁰ Robert C. Ellickson, *Order without Law: How Neighbors Settle Disputes* (1991).

suggests that if a fence were an efficient solution to such a problem, it would be built no matter who the law viewed as being “at fault”—that is, whether the legal regime was the kind described as “open range” (in which farmers could let their cows eat what they found) or “closed range” (in which ranchers were liable for damage done by their trespassing cattle). The parties would treat the legal rule as a starting point for negotiations, but then do whatever is efficient; the legal rule would affect which side paid for the fence, but not whether the fence got built. Ellickson conducted extensive interviews with ranchers and farmers in rural Shasta County, California, and found a different result. Neighbors did talk about these problems and resolve them, but they didn’t use the legal rules as a starting point and didn’t bargain from them in the way that Coase imagined. Their disputes were resolved according to norms of neighborliness. Those norms may well have been underpinned by good economic sense, and all concerned may have been acting rationally,¹¹ but in any event the pattern of behavior was not what Coase’s paper had described.

The three studies just summarized each found situations in which the world did not operate in the way that Coase’s paper described. They obviously do not prove that the world *never* operates as Coase described; sometimes it assuredly does. Every lawyer knows that parties to lawsuits sometimes bargain after their cases are over, or before their cases start, and that the party willing to bid the most for rights often ends up with them in the end. Perhaps the upshot of the famous article should instead have been called the Coase Tendency. But the Coase *Theorem* says more—not that parties sometimes negotiate in those ways, but that they invariably do so when there are efficiencies to be gained and transacting is easy. If the question is whether the studies “disprove” the Coase Theorem, the answer depends, as we have seen, on how transaction costs are defined. The more practical question is different. It is how quickly we should assume that people will bargain their way from legal entitlements to efficient results. The lesson of the studies to date is that such assumptions should be made cautiously. Actual bargaining over legal rights, even when it looks simple, can be impaired by knotty features of the parties’ circumstances—information costs, norms about bargaining, feelings about each other—that are easily overlooked.

3. Controlled Experiments

A more specific point that Coase made involved opportunity costs. He observed that if someone has the right to do something, the true cost of using that right includes the price that someone else would have paid to buy the right away from the user. So if you are given a free ticket to a concert, using it isn’t really free; the true price of attendance is still whatever someone else would have paid you for the ticket. Coase suggested that people can be expected to treat those sorts of opportunity costs the same way that they treat out-of-pocket costs.

¹¹ See the discussion in David D. Friedman, *Less Law Than Meets the Eye*, 90 Mich. L. Rev. 1444 (1992).

Nobody identifies that claim as the Coase Theorem *per se*, but it is an important aspect of how the Theorem works.¹²

To take a brief example: imagine a polluter upstream and a victim of the pollution downstream. The law has to decide whether the polluter should pay damages to the victim. The Coase Theorem suggests that, if transaction costs are nil, the same amount of pollution will occur no matter how the law answers that question. This sounds surprising, because forcing the polluter to pay damages makes polluting more expensive for him, which one would expect to reduce how much polluting he decides to do. Coase's point was that polluting is just as expensive for the polluter even if he doesn't have to pay damages. If he has the right to pollute and does it, he will forgo whatever payment the victim would have made to get him to stop. That is the same as paying damages after all.

Suppose, for instance, that the pollution causes the victim \$50,000 in damages. If the polluter has to pay those damages, then \$50,000 is what the polluting will cost him; that is the easy point to see. If the polluter doesn't have to pay damages, however, then the victim will offer him \$50,000 to stop—so \$50,000 is *still* what the polluting will cost the polluter, because he will have to forfeit a \$50,000 payment from his neighbor if he goes through with it. This doesn't make the polluter indifferent to the legal rule. Of course he would rather have the right to pollute than not have it. If he has the right, he can demand \$50,000 to stop (or he can turn down the victim's offer and keep going). If he doesn't have the right, he will have to pay \$50,000 for it. But the marginal decision to pollute or not pollute is, either way, a decision about whether polluting is more valuable to him than \$50,000. It is the same if he is deciding whether to pay that amount to start polluting (an out-of-pocket cost) or deciding whether to refuse an offer of that amount to stop polluting (an opportunity cost). Coase suspected that the counterintuitive character of this point was the reason why the argument of his article was so hard for economists to accept at first.¹³

The analysis just shown assumes, as usual, that there are no transaction costs, and also that neither side's decisions are constrained by their ability to pay (so we must imagine that both sides, regardless of the legal rule, can afford to give effect to their preferences, and that the "wealth effects" that follow from giving the rights to one side or another do not affect their behavior). The story also assumes, though, another point of greater interest to us here: that people feel the same way about paying a given sum of money and turning down the same amount. This aspect of the Coase Theorem has been subject to a good deal of testing in controlled experiments. The results on the whole do not tend to support Coase's expectation. In some instances, depending on the structure of the experiment, the parties to them do show willingness to bargain their way to an

¹² See, e.g., Coase, *supra* note 1, at 9-11

¹³ See Ronald H. Coase, Centennial Coase Lecture (Chicago, 2003) (<https://www.youtube.com/watch?v=yqT6koFnEwA>).

outcome that maximizes their joint welfare.¹⁴ But ordinary people often treat opportunity costs and out-of-pocket costs differently; the studies routinely find differences between what people are willing to pay for a thing and what they demand to give it up if they own it. Subjects are willing to pay one price for goods offered to them—mugs, binoculars, chocolate bars—but demand a different and greater price for the same goods once they have them.¹⁵

The difference between out-of-pocket costs and opportunity costs is intuitive even if it is not what theory would predict. When an airline has overbooked a plane and offers volunteers \$200 to change to another flight two hours later, it may get few takers; but if you told all the passengers that they would be required to pay \$200 to keep their seats, or else be moved to flight two hours later, it seems likely that many of them would decline to pay the money—even assuming that they have sufficient funds to pay the \$200 without great hardship.¹⁶ If the reader will concede the result of this thought experiment, notice that from an economic standpoint this difference in outcome would not seem rational: keeping one's seat on the earlier plane is either worth \$200 or it isn't, and that equation shouldn't be affected by whether a passenger is being offered \$200 to change flights or being asked to pay that amount to avoid doing so.

Various theories have been offered to explain these results. It may be that the owner of a right comes to value it more just by virtue of the ownership—the so-called endowment effect.¹⁷ It may be that the results are best explained by related notions from prospect theory: the idea that people feel losses more keenly than gains.¹⁸ Others have doubted the power of those explanations and want subtler accounts of when and why people are willing to pay less for a thing than they would be willing to accept to relinquish it.¹⁹ Whatever the reasons, however, few close students of human behavior or psychology expect ordinary people to consistently treat out-of-pocket costs and opportunity costs quite the same way. On the other hand, nobody doubts that some parties *do* treat them identically. For a corporation or other sophisticated party involved in repetitive matters with high financial stakes, treating opportunity costs as fundamentally different from out-of-

¹⁴ See, e.g., Elizabeth Hoffman & Matthew L. Spitzer, *The Coase Theorem: Some Experimental Tests*, 25 *J.L. & Econ.* 73 (1982).

¹⁵ See, e.g., Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 *J. Pol. Econ.* 1325 (1990). For fuller discussion and citations, see Steven G. Medema & Richard O. Zerbe, Jr, *The Coase Theorem*, in 1 *Encyclopedia of Law and Economics* 836 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000).

¹⁶ The example is drawn from Mark Kelman, *Consumption Theory, Production Theory, and Ideology in the Coase Theorem*, 52 *S. Cal. L. Rev.* 669 (1979).

¹⁷ See Jack L. Knetsch, *The Endowment Effect and Evidence of Nonreversible Indifference Curves*, 79 *Am. Econ. Rev.* 1277 (1989); Herbert Hovenkamp, *Legal Policy and the Endowment Effect*, 20 *J. Legal Stud.* 225 (1991).

¹⁸ Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *Econometrica* 263 (1979).

¹⁹ See Gregory Klass and Kathryn Zeiler, *Against Endowment Theory: Experimental Economics and Legal Scholarship*, 61 *UCLA L. Rev.* 2 (2013); Russell Korobkin, *Wrestling With the Endowment Effect, or How to Do Law and Economics Without the Coase Theorem*, [citation].

pocket costs would be expensive. Coase once said that he expected irrationality to be subject to the same law of demand as anything else: the more expensive it becomes, the less one finds of it.²⁰ The practice of treating opportunity costs as less real than out-of-pocket costs may be like that. The fact remains, however, that if people do not treat those kinds of costs the same way in general, the Coase Theorem will not describe their behavior accurately.

4. Judicial Knowledge and Use of the Coase Theorem

A final real-world question about the Coase Theorem is the extent of its influence on judges. Perhaps we should consider first how it ever *could* influence judges. The main possibilities: (a) A “Coasean” judge could, in deciding a case or devising a remedy, count on the idea that the parties—or future litigants like them—can bargain their way to an efficient result regardless of the decision. Or (b) a judge could fashion a decision that will reduce transaction costs between the parties and thus facilitate bargaining afterwards. Or (c) a judge could fashion a decision that will save transaction costs for the parties by putting them into an efficient position already. Or, similarly, (d) a judge could make a decision that reflects an appreciation of the high transaction costs between the parties and their inability to bargain to any different result. In all of these situations, a Coasean approach would mean taking the steps just described for the sake of efficiency.

The extent to which judges have been consciously influenced by Coase in any of these ways appears to be negligible. To begin with the evidence provided by citations: Coase’s article is one of the most heavily cited article in the history of American law reviews,²¹ but it has been cited only 40 times in American judicial opinions—24 times, if opinions by Judges Posner and Easterbrook are excluded (to avoid the impression that multiple citations reflect influence on a comparable number of different courts), and only five of those have been in the last twenty years. And those citations usually do not suggest any actual influence on a court’s decision. They are usually just a dash of erudition after a reference to transaction costs or efficiency.

We should next consider whether the Coase Theorem might influence the thinking of judges even if they don’t bother to cite it. To explore this possibility, I conducted an informal survey of 70 judges in the general region of the United States where I work—a mix of federal and state judges from the trial and appellate levels. (To obtain candid answers, I promised not to identify the respondents or their courts.) I asked them whether they had heard of the Coase Theorem, whether they could state it, and whether it had, to their knowledge, ever influenced their decisions. The results:

²⁰ See Ronald H. Coase, Centennial Coase Lecture (Chicago, 2003) (<https://www.youtube.com/watch?v=yqT6koFnEwA>).

²¹ Fred R. Shapiro, The Most-Cited Law Review Articles, 73 Cal. L. Rev. 1540 (1985).

The number of judges who thought the Coase Theorem had ever influenced their decisions was zero.

Three judges out of the 70 could state the Coase Theorem accurately. Six others were able to state a proposition that was in the ballpark or perhaps half-right—the sort of response that would have earned partial credit on an exam. (One said he could state it but didn't try. I did not give credit for that answer.)

39 of the 63 judges (56%) said that they had never heard of the Coase Theorem. 22 of them (31%) believed they had heard the phrase but did not know, or could not remember, what it meant.

Those who had at least some understanding of the Theorem typically said it was irrelevant to their decisions. One wrote:

It does not influence my judging because I don't view judging as public policy making. The judiciary is institutionally incompetent as a public policy maker and that is not a power we should have. But it does affect my view of the world. I do believe in general that markets can distribute better than central planners.

Another wrote the following, which was the strongest statement of influence made by any judge:

But has it influenced my decisions? Not in the sense that I've ever actually thought: "Aha, Coase Theorem!" But probably in the very general sense that it informs the way I think about how people interact or transact business, and whether somebody is harmed by the effect of some rule or regulation.

Some responded to my inquiry with a bit of incredulity (one of them replied, "Nerd!"); to them the Coase Theorem may have been a striking specimen of academic esoterica—as if I had asked whether they knew about the Bogoliubov Transformation²² and whether it had influenced their work. ("Never heard of it, but, of course, I have never been considered an intellectual," was the reply of one prominent judge.)

This result should not be surprising. Most judges do not spend any time reading the sort of legal scholarship that would talk about what Coase said and its implications; many of them rarely read legal scholarship at all. And if judges heard about the Coase Theorem in law school, the exposure would probably have been brief. Coase sometimes gets mentioned for a few minutes in first-year courses on property and torts, but the significance and implications of his arguments are not usually explored in the kind of detail that would leave a lasting

²² From quantum mechanics.

impression. As one might therefore expect, the citations by courts to Coase's article have often been from judges who had previous careers as law professors.

And of course judges also depend heavily on lawyers to put relevant ideas and authorities in front of them. Those lawyers do not suggest the Coase Theorem as a relevant consideration when they argue a case. In a search of all briefs in the Westlaw database, Coase's article is cited in 45 of them. Most of those briefs were filed in the United States Supreme Court, usually by *amicus curiae*. The Supreme Court has cited *The Problem of Social Cost* once in its history, in a footnote to a dissent.²³

The discrepancy between Coase's academic and judicial influence is a reminder of what is known to every lawyer and most academics: the legal academy and the profession have different ideas about what counts as interesting and worthwhile. The Coase Theorem is merely the best possible example of the point. It may be the most influential single idea in the American legal academy over the past 50 years; it is an idea that almost every full-time American law professor has surely heard of and that a large share of them can state. On the limited evidence I have found, however, it is an idea that most judges have not ever heard of, that perhaps 5% of them can state, and that very few, if any, think has influenced their work at all. Perhaps it suffices here just to observe that law professors often regard it as their scholarly mission to study the legal system rather than to help those who operate it.²⁴ Those are different activities, and different materials are relevant to them.

Of course judges who know nothing about the Coase Theorem might nevertheless act in ways that are consistent with it. They might, for example, be mindful that the parties to the cases in front of them, and other parties who have later disputes, can negotiate their way around whatever the court says. Or judges might try to make decisions that are efficient by giving the parties (or future parties) what they would likely want if they were negotiating over the matter. Thus it is an old and familiar idea in contract law that the rules made by courts serve as defaults that the parties can improve upon if they wish. It is also old and familiar learning that decisions in contract cases might usefully approximate what the parties would have wanted if they had thought about the issue in advance. And it takes little enough imagination to observe that one party to a property dispute can try to buy out the other if unsatisfied with a court's decision about it. All these thoughts are in sympathy with the Coase Theorem, but by themselves they suggest no *influence*; they were around before Coase was, as he would have been the first to say. I do not quite regard them as "uses" of the Coase Theorem—but for the reader who does so regard them, Coasean decisions may be

²³ *United Housing Federation, Inc. v. Forman*, 421 U.S. 837, 863-64 (1975) (opinion of Brennan, J.).

²⁴ See generally Ward Farnsworth, *The Academy and the Profession*, in *The Oxford Handbook of Legal Studies* (Cane and Tushnet, eds.) (2003).

regarded as common enough, just as many judges may display a tacit appreciation of efficiency as a value in their decisions without ever thinking about the word.

The Coase Theorem has had some likely influence outside the academy in other ways. One of them is in the regulatory sphere, where the Theorem has encouraged a strain of thinking that favors less regulation and a preference for letting the market take care of problems. If the parties will bargain their way to an efficient result, why not let them do that instead of making administrative rules about it? Or if the parties cannot reach efficient results themselves, perhaps the law should seek to reduce transaction costs where it can, the better to help parties negotiate to results that suit them best. Coase himself has described the reduction of transaction costs as a key purpose for lawyers to serve in the economic system. His article, along with the rest of the literature that it generated, may have caused that general idea to become more familiar in law schools, and subsequently in some agencies, than it would have been otherwise.

Whether these varieties of influence would have pleased Coase, or did please him, is another question. As noted at the start of this essay, Coase himself stated no theorem, nor was he very fond of the formulations devised by others. He knew well, and said often, that transaction costs are pervasive, and he was more interested in how economists should account for them than in what rules would be best if such costs didn't exist.²⁵ And he denied being hostile to regulation; his position was just that the costs and benefits of regulation should be realistically compared to the costs and benefits of leaving problems to be solved by markets. He claimed to have no general view that one was better than the other (though not everyone believed him).²⁶ The influence that Coase most desired for his work was different, and not as widely achieved as he wished. He wanted it to inspire a greater interest in the actual workings of the world.²⁷ The studies discussed in this essay might therefore be considered friendly to Coase's project, not as antagonistic to it.

5. Conclusion

This discussion might appropriately end with a reminder of a point that is important for the sake of perspective: the Coase Theorem has been one of the most theoretically fruitful ideas in the recent history of law and of economics. It called attention to the importance of transaction costs in the economic system, and has spawned an immense literature, some of it empirical, that considers the implications of those costs and legal responses to them. But to return to the more

²⁵ See Ronald H. Coase, *The New Institutional Economics*, 140 *Journal of Institutional and Theoretical Economics* 229 (1984).

²⁶ See A.W.B. Simpson, *Coase v. Pigou Reexamined*, 25 *J. Leg. Stud.* 53 (1996).

²⁷ See Ronald H. Coase, *The Firm, the Market and the Law* 30-31 (1988); see also [Bertrand and Pratten chapters.]

modest questions I have sought to answer, the Coase Theorem has not had much influence on how judicial decisions get made, and probably shouldn't.