

# TRANSACTION COST AND THE ORGANIZATION OF OWNERSHIP— AN INTRODUCTION

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*Transaction cost became a prominent consideration in discussions related to externalities and ownership arrangements during the last half-century, but I am now convinced that its importance in these matters is much overstated. I explain why I think so in this Essay. My focus will be on ownership arrangements, since this conference has met to discuss one such arrangement—the gridlock economy. With less detail, I also comment on the role claimed for transaction cost in regard to externality problems.<sup>1</sup>*

## INTRODUCTION

Mainline economists during the neoclassical period of economics undertook the task of explaining how an extremely decentralized economy, unaided by central planning, based on private resource ownership, and relying mainly on prices for information, allocates its scarce resources. They aimed their work at conceptualizing and understanding markets and prices, the main sources of information for resource owners in such an economy. The work presumed an understanding of and a respect for private ownership. The presumption encouraged analytical neglect of private ownership itself. Karl Marx and his followers gave some attention to ownership arrangements in the underworld of economics, but this work dealt mainly with the impact of ownership on the conflicting interests of investors and wage owners. Ownership arrangements of the sort discussed today are hardly visible in works produced by economists, mainline or underworld, during neoclassical times.

Work on ownership arrangements did not become serious until well into the twentieth century, although R. H. Coase, in his 1937 article on the firm, did attempt to bring attention to the need for understanding ownership structure as

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1. A more detailed, historical, and nuanced treatment of this topic and the error of attributing it to transaction cost can be found in Harold Demsetz, *The Problem of Social Cost: What Problem?: A Critique of the Reasoning of A.C. Pigou and R.H. Coase*, 7 REV. L. & ECON. 1 (2011).

measured by degree of vertical integration.<sup>2</sup> It was Coase's later article, the famous *The Problem of Social Cost*,<sup>3</sup> that, although not dealing with alternative ownership systems, did succeed in enticing economists, including myself, to think about different arrangements for controlling resources. Among the articles I wrote on this topic is *Toward a Theory of Property Rights*.<sup>4</sup> I mention it because it will be of use when I explain my objections to the emphasis now given to transaction cost and to Heller's heavy reliance on transaction cost in his fine book, *The Gridlock Economy*.<sup>5</sup>

### I. OWNERSHIP ARRANGEMENTS

In his 1937 study of the firm, Coase makes the cost of using the price system (hereafter, the cost of transacting) the prime consideration in attempts to explain variation across firms in the degree to which they are vertically integrated. If the cost of transacting is high, firms will reduce their reliance on obtaining from other firms some of the inputs they use, turning instead to relying more heavily on producing these inputs themselves. In-house production of inputs constitutes vertical integration in the production process that brings forth finished goods. Hence, an increase in the cost of transaction results in an increase in the degree of vertical integration. Coase, in my judgment, is correct about this. His success may have influenced the approach he later took toward the problem of social cost. This is an important problem in the history of economics and in the development of regulations that impinge on market exchange, but it is a problem that is quite different from that of vertical integration.

My 1967 study of property rights also refers to transaction cost, but its main line of argument does not rely on this cost. The study was undertaken to seek an explanation of land ownership arrangements that had been uncovered by anthropologists in their studies of Native Americans living in the Labrador Peninsula early in the eighteenth century. At that place and time, organization of land control was transformed by Native Americans from the arrangement we now call a commons to one that is best described as family-centered private ownership. My goal was to explain this transformation. In doing so, I found it necessary to explain why a similar transformation did not take place in Native American communities of the American Southwest.

Two conditions seemed to offer the core explanation: growth in the European fur trade and the differences in roaming habits of animals of northern forests as compared to animals of the Great Plains. The transformation to family-centered private ownership in the Northeast followed the timing and geography of growth in the European fur trade. This growth fueled a significant rise in the hunting of fur-bearing animals in the New World. Stocks of easily accessed fur-bearing animals diminished more rapidly than was efficient, since the strain put by

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2. R.H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).

3. R. H. Coase, *The Problem of Social Cost*, 3 *J.L. & ECON.* 1 (1960).

4. H. Demsetz, *Toward a Theory of Property Rights*, 57 *AM. ECON. REV.* 347 (1967).

5. MICHAEL HELLER, *THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES* (2008).

“today’s” open-access hunting on stocks of fur-bearing animals is borne mainly “tomorrow.” Privatization of land by resident Native Americans in the region was a practical means for reducing this strain. Why this practicality? Two reasons may be given: first, excess hunting would now deplete the value of land that has become privately owned, resulting in owner-imposed constraints on the scale of hunting; second, animals of the forest lands of the Northeast generally do not stray far from their burrows and nesting places, thus enabling ownership of land to confer rough control of the stock of animals on the land. Animals of the Southwest, however, graze over large distances in search of edible grasses, breaking the connection between land ownership and control of animal stocks, at least until extensive, maintainable fencing arrives. And, indeed, free-access hunting in the Southwest did significantly deplete the number of bison. Animals of the forested Northeast are like mineral deposits, relatively fixed in position; animals of the grasslands of the Southwest are like fish, mobile wanderers in a sea of grass. Private ownership became the efficient ownership form in the Northeast because it was cost effective. The commons remained the efficient ownership form in the Southwest because maintenance of land control, though costly, did not effectively enable control of animal stocks.

This old study emphasizes two notions. The first is that organizational efficiency cannot be established simply by knowing the characteristics of alternative organizational forms; the two forms discussed, family private ownership and a commons, differ in their characteristics, but each is efficient under the conditions that exist where it manifests itself. The second is that the efficiency of an organizational form is not primarily determined by transaction-cost considerations. A “commons” arrangement does depend on securing the agreement of all or of many members of the community that control the commons. The difficulty this imposes on shifting to a different organizational arrangement, such as privately owned parcels of the commons, is not due primarily to costs that must be incurred to contact members of the community and secure agreement from them. Indeed, tribal owners of commons land in the Northeast, who succeeded in privatizing land holdings, faced the same contact/agreement problems as did tribes of the Great Plains and Southwest. To understand why different arrangements are efficient in these two regions one must also look at the cost of controlling overuse of the resource that is threatened with depletion. This was low in the Northeast and high in the Southwest because of the different wandering habits of animals that populated the two regions. Ultimately, this difference in cost of control was due to different climates in the two regions. Essentially, transaction cost, though relevant, is not of special relevance as compared to other costs and usually is of less relevance than differences in natural conditions of climate (and, possibly, topography).

Aside from these notions, the efficiency of an organizational arrangement also cannot be determined without an understanding of the intent of users of a resource. In the study just discussed, I simply assumed that Native Americans desired to maximize the wealth locked up in animal stocks, but they would have found little value in husbanding animals if, like some religious orders, they attached little psychic or social value to wealth accumulation and, in contrast, attached great value to protecting berries and corn from wild, hungry animals. An

assessment of the efficiency of an institutional or ownership arrangement, then, depends on the goals of owners of the resources that are being put to use.

With these notions in mind, consider the anticommons. It poses a problem of holdouts because it is defined by the existence of a multiplicity of owners of the same resource. An attempt to offer a resource for sale that is owned as an anticommons requires approval of all the owners of this resource.<sup>6</sup> The existence of effective ownership rights to exercise a veto creates an incentive for some, possibly all, owners to refrain initially from entering into an agreement to sell, since each is in a position to realize an increase in his or her share of the expected gain from the sale. The problem presented by the anticommons is that of strategies toward wealth distribution, where some owners, by holding out, hope to persuade others to give them special treatment. This is not a transaction-cost problem. The owners, we suppose, may be able to negotiate and contract at no cost. Still, strategic considerations stand between such negotiations and agreement.

Yet, the cost of delay that is likely to result from holdout behavior may seem small if the involved people, in setting up an anticommons, anticipate dealing with issues of such great personal import to them that they prefer an arrangement that demands unanimity before action is taken. It is not inconceivable, for example, that writers of our Constitution might have permitted it to be changed by a simple majority of states of the union, but they viewed maintenance of the Constitution so vital that they insisted on a plurality much greater than a majority. Without knowledge of what motivates people to create and be members of a commons or of an anticommons, we are unable to judge the efficiency consequences of the ownership arrangement they elect.

Consider now a summary view of the Quaker Oats Big Inch Giveaway that Heller discusses in *The Gridlock Economy*. Quaker Oats, it seems, bought about twenty acres of scrubland in the Klondike and subdivided it into twenty million parcels of one square inch each. A deed to one of these parcels was made available to each purchaser of a box of Quaker cereals. Thus, twenty million well-defined private entitlements were created, one each for a determinable one-inch parcel. At some future time, something valuable, such as oil, is found within the perimeter of the twenty acres. Assume that the petroleum potential of the site cannot be developed unless the whole site can be acquired by a petroleum producer. Unification would require a search for twenty million owners and a matching set of negotiations, the combined cost of which makes development of this resource unprofitable. Had there been a single owner, or only a few owners, we assume that it would have been profitable to develop the site and extract the oil, for then the cost of transacting involved in unifying ownership would have been avoided.

However, transaction cost is not the central issue that Heller seems to suppose. Alternatively, suppose Quaker had chosen the same number of one-inch squares from locations that separated these squares from each other, such as from

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6. The owners may have made some prior agreement to substitute voting rules and/or delegations of authority, as they have, for example, in the modern corporation, and this would negate a unanimity requirement, but then the ownership arrangement ceases to be an anticommons.

locations scattered widely across the fifty states. If anything, transaction cost would be greater with this arrangement than it would be if all one-inch squares had been taken from the single twenty-acre Yukon arrangement. Yet, the dispersed parcel arrangement does not seem to suggest inefficiency as strongly as does the Yukon arrangement. The issue, then, cannot be transaction cost per se. What is it? It is the greater plausibility that oil will be sought and found in a unified parcel of twenty acres than in each of twenty million widely separated locations, for it is the practicality and desirability of oil production that is frustrated by the Yukon arrangement. There is a somewhat greater probability that the arrangement actually chosen by Quaker will turn out to be a mistake as judged by the goal of securing petroleum, but suppose no valuable buried resource was found on these twenty acres. We cannot conclude, as Heller seems to, that the arrangement was a mistake or that it was socially inefficient.

Indeed, it seems unreasonable to suppose that Quaker was interested in petroleum when it devised its Yukon campaign. This was an advertising campaign. As such, it sought a location that had some color and adventure associated with it. From Quaker's perspective, it chose an efficient ownership arrangement. In a probabilistic sense, if we treat advertising as a "good" rather than as a "bad," it also chose an efficient location from society's perspective. Quaker made the judgment that this twenty-acre piece of the Klondike was not then and would not likely become valuable enough to make this choice of advertising a mistake, and it did not expect that value-enhancing opportunities, should they arise, would demand unification of ownership. There is guesswork here; we may suppose it is well-informed guesswork even though it leaves a chance that the guess will turn out wrong. Some positive error rate is a necessity if resources are to be allocated efficiently, for we live in a world in which information is costly. Some errors may turn out to be so important as to justify bearing costs of correction, but this cannot be true for the average advertising experiment. I do not deny mistakes. I deny that it is efficient to use scarce resources in attempts to eliminate all possible errors or for remedying all outcomes that happen to have turned out to be second best.

## II. EXTERNALITY DOCTRINE

If transaction cost is not the source of the problem in the Quaker's Big Inch Giveaway, surely it is for problems that we associate with externalities; at least, this is the opinion imbedded in current economic doctrine toward externalities. Well, this doctrine is wrong.

The origin of the doctrine is Coase's 1960 article *The Problem of Social Cost*, in which he argues two cases: one where transaction cost is zero and one where it is positive. No externality problem is possible if transaction cost is zero because persons who bear effects (say, costs) from actions taken by someone else (who, we will suppose, is legally entitled to take these actions) can bring these costs to bear on his decision as to whether or not to take these actions. This is done simply by offering payments to him if he will cease taking these actions, such payments reflecting costs that others bear from these actions. If the action-taker accepts these payments and is therefore obligated to desist from the actions he contemplates taking, it will be because the offered payments at least equal the cost he suffers by not taking these actions. In this case, refraining from taking these

actions generates more social value than would their continuance. If the payments do not at least equal the cost he would bear were he to refrain from taking the actions he contemplates, he will not agree to desist. This will happen only if the cost he bears from not taking the actions exceeds those borne by others if he does take the actions; otherwise, those harmed would find it in their interests to raise their offers to him for foregoing further actions. In this case, too, social value is increased. There is no inefficiency in either case. Private cost equals social cost in both cases, and, as Coase cleverly shows, the same is true if we begin the example with “the other persons” entitled to block the intended actions. The only difference in this case is that payments flow in the opposite direction, from the person who seeks to take the actions to those who would suffer if the actions are taken.<sup>7</sup>

This does suggest that an efficient solution to interactions of this sort depends on the practicality of making offers and counter-offers, and positive transaction cost does seem to undermine, at least partially, the practicality of doing this. But, this is logical error. The above discussion shows the irrelevance of externality problems if transaction cost is zero, but this does not imply that externality problems are relevant if transaction cost is positive. The positive transaction cost case will now be examined.

Intermediate cases offer no enrichment of our understanding, so let transaction cost be so high that the flow of offers and counter-offers is completely blocked. The actions will surely be taken if the person who desires to take these actions has the legal right to do so. And, alternatively, if those who would be harmed by these actions have the legal right to be free of these actions, then, just as surely, the actions will not be taken. In this case, unlike the zero transaction-cost case, the outcome, the taking of activities, differs, as does the “location” of legal rights. In the zero transaction-cost case this is not true, although different right assignments will change the distribution of wealth for the interacting parties; payments flow one way with one right assignment and the opposite way with the other right assignment.

It is now necessary, however, to recognize that the transacting requires expenditures of resources. These expenditures must be factored into our judgment about what is, and what is not, efficient. Transacting uses real resources; this must be taken into account when passing a judgment on efficiency. Transaction cost, by assumption, is so high that it would be inefficient to have transactions, no matter in which direction payments flow. We do get a different solution depending on the way rights are assigned, but this reflects the motives and thoughts of the justices who determine which of the involved parties should receive the assignment. Given the court’s decision, whichever solution we end up with is efficient since the cost of negotiating to offset or reverse the initial effect exceeds the benefit of doing so. The assignment of rights favored by the court is not a product of the marketplace. It is a product of the legal system. The legal system is, in fact, designed to be insulated from financial bidding for one assignment or the other. Given the

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7. We are working within the context of the common law. Actions can be brought about in the face of legal opposition if those opposed to the actions are willing to accept payments to permit the actions. In this case, Coase’s demonstration is quite correct; no inefficiency is caused by the interactions associated with the contemplated action.

decision of the courts, the market does the best it can, and this means the market yields an efficient allocation of resources given the requisite legal decision.

The situation is no different from one that has long been understood in economics—government policy to redistribute wealth. Here, the government is the non-market institution whose decision will affect what is produced in the economic system. A redistribution of wealth puts more money in the pockets of some people and less in the pockets of other people. The redistribution is almost certain to result in the production of different bundles of goods. The choice, then, is between distributions of wealth, one of which will lead to a different set of demands for goods than will the other. We do not describe one bundle as a reflection of efficient resource use and the other bundle as a reflection of inefficient resource use. Both alternative bundles are economically efficient if they yield the highest value output that the new distribution of wealth allows.

The logic is no different if we return to the prohibitive transaction-cost scenario. When a court assigns a common law right to one person and not to another person, it alters the distribution of wealth between them. This leads to a different outcome (in terms of actions or outputs) from that which would occur with the opposite court decision. In either case, the market does the best it can. It makes the best possible use of resources, but this use is different with one assignment of rights than it is with the other.

Prohibitive transaction cost is very much like the cost incurred to ship goods between two firms. With zero (or low) shipping cost, the two firms may exchange goods. With prohibitively high shipping cost, they refrain from this and resort instead to in-house production of goods they otherwise would have exchanged. The shipping cost is relevant to an efficient solution and must be taken into account. The efficient solution is self-sufficient production if this cost is high, and it is exchange between the firms if it is low. Efficient use of resources is obtained in either case. And, say, isn't shipping a component of transaction cost?