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Ronald Coase

The Nature of Firms and Their Costs

One of my favorite philosophers—Yogi Berra—once said "You can observe a lot just by watching." Economist Ronald Coase did just that, and it earned him a Nobel Prize. Coase has always asked economists to be keen observers, trying to understand why things operate as they do, rather than pure theoreticians, wondering why the world doesn't conform to their theoretical models of reality. And he led the way by observing industrial organizations and structures up close before theorizing about them.

Karl Marx said philosophy had explained the world and now it was necessary to change it. Coase's writings imply that this approach is backwards. First observe the world, he says, and then explain it. Having done so, we learn that in many cases it is not necessary to change it. Adam Smith expressed this fundamental insight about existing institutions and market structures with his famous metaphor of the invisible hand. And no economist has a better claim to having furthered this key lesson than the one we recognize with this edition of Economic Insights, *a man whose observations changed economics forever.*

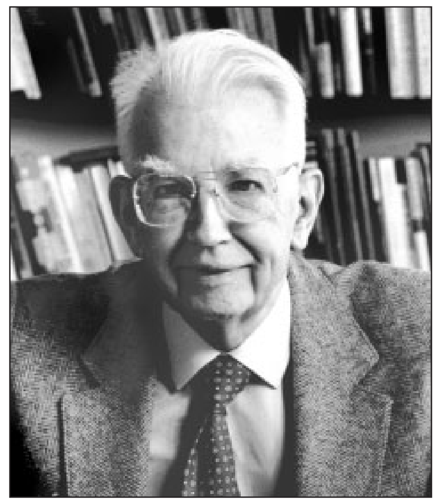
— **Bob McTeer**
President
Federal Reserve Bank of Dallas

Ronald Harry Coase was born in a London suburb in 1910. He was educated at the London School of Economics from 1929 through 1932, studying industrial law with the intention of becoming a lawyer. But that changed after his exposure to Professor of Commerce Arnold Plant, who came to the London School of Economics from a position in Cape Town, South Africa, in 1930. Plant's influence put Coase firmly on the road to becoming an economist and also shaped his attitude that economic theory is fine as long as it's grounded in reality.

During 1931–32, Coase traveled to the United States on a scholarship to study the structure of American industry. This study became the basis for Coase's lifetime fascination with industrial organization and his later work on the nature of firms and their costs.

After leaving the London School of Economics, Coase held a series of teaching positions: at the Dundee School of Economics and Commerce (1932–34), the University of Liverpool (1934–35) and the London School of Economics (1935–51). Immigrating to the United States in 1951, Coase taught first at the University of Buffalo, then joined the faculty of the University of Virginia in 1959. He moved to the University of Chicago in 1964, remaining there until 1982. He was awarded the Nobel Memorial Prize in Economic Sciences in 1991.

Coase's central contributions to modern economic theory are recorded in two seminal articles published in the University of Chicago's *Journal of Law and Economics*—"The Federal Communications Commission" (1959) and "The Problem of Social Cost" (1960)—as well as in an earlier article, "The Nature of the Firm," published in *Economica* (1937). In "The Nature of the Firm," Coase explained that firms exist because they reduce the transaction costs that emerge during production and exchange, capturing efficiencies that individuals cannot.



University of Chicago News Office

Ronald Coase

Coase was heavily influenced by Frank Knight's monumental *Risk, Uncertainty, and Profit* and Philip Wicksteed's *The Common Sense of Political Economy.* The former inspired his interest in institutions and the structure of productive process. The latter led him to study constrained optimization problems, that is, choices that are constrained by costs, information, market prices and uncertainty.[1]

In his article about the Federal Communications Commission, Coase showed economists the crucial importance of institutional property rights and how their presence or absence influences the efficient allocation of scarce resources. In that paper, Coase first put forward what has come to be known as the Coase

Why Do Firms Exist?

Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated, and in place of the complicated market structure with exchange transactions is substituted the entrepreneur–co-ordinator, who directs production. It is clear that these are alternative methods of co-ordinating production. Yet, having regard to the fact that if production is regulated by price movements, production could be carried on without any organization at all, well might we ask, Why is there any organization?…

In view of the fact that while economists treat the price mechanism as a co-ordinating instrument, they also admit the co-ordinating function of the "entrepreneur," it is surely important to inquire why co-ordination is the work of the price mechanism in one case and of the entrepreneur in another. The purpose of this paper is to bridge what appears to be a gap in economic theory between the assumption (made for some purposes) that resources are allocated by means of the price mechanism and the assumption (made for other purposes) that this allocation is dependent on the entrepreneur–co-ordinator. We have to explain the basis on which, in practice, this choice between alternatives is effected….

The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism. The most obvious cost of "organizing" production through the price mechanism is that of discovering what the relevant prices are. The cost may be reduced but it will not be eliminated by the emergence of specialists who will sell this information. The costs of negotiating and concluding a separate contract for each exchange transaction which takes place on a market must also be taken into account. Again, in certain markets, e.g., produce exchanges, a technique is devised for minimizing these contract costs; but they are not eliminated. It is true that contracts are not eliminated when there is a firm but they are greatly reduced. A factor of production (or the owner thereof) does not have to make a series of contracts with the factors with whom he is co-operating within the firm, as would be necessary, of course, if this co-operation were a direct result of the working of the price mechanism….

We may sum up this section of the argument by saying that the operation of a market costs something and by forming an organization and allowing some authority (an "entrepreneur") to direct the resources, certain marketing costs are saved. The entrepreneur has to carry out his function at less cost, taking into account the fact that he may get factors of production at a lower price than the market transactions which he supersedes, because it is always possible to revert to the open market if he fails to do this. ■

—"The Nature of the Firm," 388–92

Theorem, the idea that in the absence of transaction costs, any initial property rights arrangement leads to an economically efficient outcome.

This stance was so counterintuitive that the journal editors asked Coase to retract or modify it. Coase refused to modify the article but did agree to defend himself at a history-making meeting at journal editor Aaron Director's home in Chicago. Also present and ready to question Coase were Rueben Kessel, Milton Friedman, Martin Bailey, Arnold Harberger, Gregg Lewis, John McGee, Lloyd Mints and George Stigler, as formidably skeptical an audience as any economic theorist has probably ever faced. At the end of that evening, not only was Coase still standing, but the participants had conceded his essential point. That point was systematically reiterated in one of the most-cited economics articles ever published, "The Problem of Social Cost" (1960).

Using examples from English common law, Coase methodically demonstrates that regulatory interventions can, under certain conditions, lead to less economically efficient outcomes than markets alone would create. This contrasts with the contention A. C. Pigou first put forth in *The Economics of Welfare* (1920)—that government regulation enhances efficiency by correcting for claimed imperfections, which Pigou called market failures.

Coase gets his results with an assumption of zero transaction costs, but his analysis rests also on a particular view of torts quite different from Pigou's. In the Pigouvian case, party *A* harms party *B* by engaging in trades with party *C* (and/or *D* …*n*). It is a clear case of black and white hats, for party *B* is seen as an innocent bystander who is suffering a negative externality (cost) from party *A*'s action(s). For Coase, a tort occurs only because there are conflicts over resource use and all parties can harm each other. Thus, to stop party *A* from harming party *B* is akin to harming party *A*. In this Coasian world, the assignment of property rights does not matter in terms of the efficient eco-

What Determines the Size of the Firm?

Other things being equal, therefore, a firm will tend to be larger:

(a) the less the costs of organizing and the slower these costs rise with an increase in the transactions organized;

(b) the less likely the entrepreneur is to make mistakes and the smaller the increase in mistakes with an increase in the transactions organized;

(c) the greater the lowering (or the less the rise) in the supply price of factors of production to firms of larger size.

Apart from variations in the supply price of factors of production to firms of different sizes, it would appear that the costs of organizing and the losses through mistakes will increase with an increase in the spatial distribution of the transactions organized, in the dissimilarity of the transactions, and in the probability of changes in the relevant prices. As more transactions are organized by an entrepreneur, it would appear that the transactions would tend to be either different in kind or in different places. This furnishes an additional reason why efficiency will tend to decrease as the firm gets larger. Inventions which tend to bring factors of production nearer together, by lessening spatial distribution, tend to increase the size of the firm. Changes like the telephone and the telegraph which tend to reduce the cost of organizing spatially will tend to increase the size of the firm. All changes which improve managerial technique will tend to increase the size of the firm. ■

—"The Nature of the Firm," 396–97

A New Approach to Understanding Social Costs

This paper is concerned with those actions of business firms which have harmful effects on others. The standard example is that of a factory, the smoke from which has harmful effects on those occupying neighboring properties. The economic analysis of such a situation has usually proceeded in terms of a divergence between the private and social product of the factory, in which economists have largely followed the treatment of Pigou in *The Economics of Welfare*. The conclusions to which this kind of analysis seems to have led most economists is that it would be desirable to make the owner of the factory liable for damage caused to those injured by the smoke; or to place a tax on the factory owner varying with the amount of smoke produced and equivalent in money terms to the damage it would cause; or, finally, to exclude the factory from residential districts (and presumably from other areas in which the emission of smoke would have harmful effects on others). It is my contention that the suggested courses of action are inappropriate in that they lead to results which are not necessarily, or even usually, desirable.

The traditional approach has tended to obscure the nature of the choice that has to be made. The question is commonly thought of as one in which *A* inflicts harm on *B* and what has to be decided is, How should we restrain *A*? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to *B* would be to inflict harm on *A*. The real question that has to be decided is, Should *A* be allowed to harm *B* or should *B* be allowed to harm *A*? The problem is to avoid the more serious harm…(An) example is afforded by the problem of straying cattle which destroy crops on neighboring land. If it is inevitable that some cattle will stray, an increase in the supply of meat can only be obtained at the expense of a decrease in the supply of crops. The nature of the choice is clear: meat or crops. What answer should be given is, of course, not clear unless we know the value of what is obtained as well as the value of what is sacrificed to obtain it….

The problem which we face in dealing with actions which have harmful effects is not simply one of restraining those responsible for them. What has to be decided is whether the gain from preventing the harm is greater than the loss which would be suffered elsewhere as a result of stopping the action which produced the harm. In a world in which there are costs of rearranging the rights established by the legal system, the courts, in cases relating to nuisance, are, in effect, making a decision on the economic problem and determining how resources are to be employed. It was argued that the courts are conscious of this and that they often make, although not always in a very explicit fashion, a comparison between what would be gained and what lost by preventing actions which have harmful effects. But the delimitation of rights is also the result of statutory enactments. Here we also find evidence of an appreciation of the reciprocal nature of the problem. While statutory enactments add to the list of nuisances, action is also taken to legalize what would otherwise be nuisances under the common law. The kind of situation which economists are prone to consider as requiring corrective governmental action is, in fact, often the result of governmental action. Such action is not necessarily unwise. But there is a real danger that extensive governmental intervention in the economic system may lead to the protection of those responsible for harmful effects being carried too far….

It is my belief that the failure of economists to reach correct conclusions about the treatment of harmful effects cannot be ascribed simply to a few slips in analysis. It stems from basic defects in the current approach to problems of welfare economics. What is needed is a change of approach. Analysis in terms of divergences between private and social products concentrates attention on particular deficiencies in the system and tends to nourish the belief that any measure which will remove the deficiency is necessarily desirable. It diverts attention from those other changes in the system which are inevitably associated with the corrective measure, changes which may well produce more harm than the original deficiency….

It would clearly be desirable if the only actions performed were those in which what was gained was worth more than what was lost. But in choosing among social arrangements within the context of which individual decisions are made, we have to bear in mind that a change in the existing system which will lead to an improvement in some decisions may well lead to a worsening in others. Furthermore, we have to take into account the costs involved in operating the various social arrangements (whether it be the working of a market or of a governmental department) as well as the costs involved in moving to a new system. In devising and choosing among social arrangements we should have regard for the total effect. This, above all, is the change in approach which I am advocating. ■

—"The Problem of Social Cost,"
95–96, 132–33, 153, 155–56

nomic outcome because the parties will bargain their way to the same outcome regardless of how property rights are assigned, that is, regardless of who gets to sue whom. (See the box titled "A New Approach to Understanding Social Cost.")

Coase's analysis of the theory and history of torts, combined with his assumptions about what the legal system ought to do in cases of conflict over resource use—maximize economic efficiency and thus societal wealth rather than punish specific conduct—created a huge boost for the then-young field we now call law and economics. It also created a strong pro-market bias in cases where prior theorists—most notably Pigou—had crafted regulatory responses to perceived examples of market failure.

After his successful presentation to Chicago's top social theorists, Coase was offered a position at the University of Chicago, where he edited the *Journal of Law and Economics* from 1964 to 1982. Under his editorship, the journal became one of the economics profession's most influential forums. He was the first president of the International Society for New Institutional Economics, which was founded in 1996, and he remains Clifton R. Musser Professor Emeritus at Chicago's law school.

Coase's study of positive transaction costs in economic exchange led him, and by extension the entire economics field, to a remarkable conclusion:

> I explained in "The Problem of Social Cost" that what are traded on the market are not, as is often supposed by economists, physical entities but the rights to perform certain actions, and the rights which individuals possess are established by the legal system.[2]

For our understanding of why firms exist, why institutions have evolved as

How Much Government Intervention is Appropriate?

What is the general view that I will be examining? It is that, in the market for goods, government regulation is desirable whereas, in the market for ideas, government regulation is undesirable and should be strictly limited. In the market for goods, the government is commonly regarded as competent to regulate and properly motivated. Consumers lack the ability to make the appropriate choices. Producers often exercise monopolistic power and, in any case, without some form of government intervention, would not act in a way which promotes the public interest. In the market for ideas, the position is very different. The government, if it attempted to regulate, would be inefficient and its motives would, in general, be bad, so that, even if it were successful in achieving what it wanted to accomplish, the results would be undesirable. Consumers, on the other hand, if left free, exercise a fine discrimination in choosing between the alternative views placed before them, while producers, whether economically powerful or weak, who are found to be so unscrupulous in their behavior in other markets, can be trusted to act in the public interest, whether they publish or work for the *New York Times*, the *Chicago Tribune* or the Columbia Broadcasting System. Politicians, whose actions sometimes pain us, are in their utterances beyond reproach. It is an odd feature of this attitude that commercial advertising, which is often merely an expression of opinion and might, therefore, be thought to be protected by the First Amendment, is considered to be part of the market for goods. The result is that government action is regarded as desirable to regulate (or even suppress) the expression of an opinion in an advertisement which, if expressed in a book or article, would be completely beyond the reach of government regulation….

My argument is that we should use the same *approach* for all markets when deciding on public policy. In fact, if we do this and use for the market for ideas the same approach which has commended itself to economists for the market for goods, it is apparent that the case for government intervention in the market for ideas is much stronger than it is, in general, in the market for goods….

[C]onsider the question of consumer ignorance which is commonly thought to be a justification for government intervention. It is hard to believe that the general public is in a better position to evaluate competing views on economic and social policy than to choose between different kinds of food. Yet there is support for regulation in the one case but not in the other. Or consider the question of preventing fraud, for which government intervention is commonly advocated. It would be difficult to deny that newspaper articles and the speeches of politicians contain a large number of false and misleading statements—indeed, sometimes they seem to consist of little else. Government action to control false and misleading advertising is considered highly desirable. Yet a proposal to set up a Federal Press Commission or a Federal Political Commission modeled on the Federal Trade Commission would be dismissed out of hand. ■

—"The Economics of the First Amendment:
The Market for Goods and
the Market for Ideas,"
384–85, 389–90

Theories and Reality: Making the Data Talk

Economists, or at any rate enough of them, do not wait to discover whether a theory's predictions are accurate before making up their minds. Given that this is so, what part does testing a theory's predictions play in economics? First of all, it very often plays either no part or a very minor part….

I remarked earlier on the tendency of economists to get the result their theory tells them to expect. In a talk I gave at the University of Virginia in the early 1960s, … I said that if you torture that data enough, nature will always confess, a saying which, in a somewhat altered form, has taken its place in the statistical literature. Kuhn puts the point more elegantly and makes the process sound more like a seduction: "nature undoubtedly responds to the theoretical predispositions with which she is approached by the measuring scientist." ■

—"How Should Economists Choose?"
72, 74

they have and how this shapes public policy, we owe a large debt to Ronald Coase. ■

— **Robert L. Formaini**
Thomas F. Siems
Senior Economists

Notes

[1] Cheung (1987).

[2] Coase (1991).

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