THE ECONOMIC INSTITUTIONS OF CAPITALISM

Oliver E. Williamson

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Firms, Markets, Relational Contracting

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To my teachers:

Kenneth J. Arrow
Alfred D. Chandler, Jr.
Ronald H. Coase
Herbert A. Simon

Preface

What is referred to herein as transaction cost economics is part of the revival of interest in the New Institutional Economics. Transaction cost economics owes its origins to striking insights—in law, economics, and organization—in the 1930s. As with many good ideas, operationalization came neither quickly nor easily. Grave skepticism over their tautological reputation notwithstanding, transaction cost explanations kept reappearing. The survival of this line of analysis was assured by the realization in the 1960s that "market failures" had transaction cost origins. As patterns recurred and commonalities were recognized, operationalization gradually began to take shape. The past decade has witnessed successive efforts to infuse transaction cost economics with greater operational content.

To be sure, the apparatus is still primitive and in need of refinement. Numerous applications of transaction cost reasoning have nevertheless been made. More are in prospect. Many of them turn out to be variations on a theme, which is consonant with Hayek's observation that "whenever the capacity of recognizing an abstract rule which the arrangement of these attributes follows has been acquired in one field, the same master mould will apply when the signs for those abstract attributes are evoked by altogether different elements."

A fully balanced treatment of economic organization is not herein attempted. To the contrary, economic organization is examined almost entirely, certainly preponderantly, through the lens of transaction cost economizing. Such a focused approach discloses the extraordinary degree to which economic organization is shaped by transaction cost economizing considerations. The wide range of phenomena to which such reasoning has application comes as a surprise even to those who, such as myself, are already persuaded that this is a fruitful orientation.

To be sure, transaction cost arguments are often best used in conjunction with, rather than to the exclusion of, other ways of examining the same phenomena. I therefore do not propose that a blinkered approach to economic organization proceed heedless of other alternatives. A comprehensive treatment will plainly take all of the relevant factors into account. Greater weight, however, will presumably be accorded to those approaches that make greater and more systematic headway.

My substantial excuse for proceeding in a narrowly focused way is that transaction cost economics is still in an early developmental stage. The potential scope and significance of the approach will be realized only upon relentless application of this type of reasoning. To be sure, there is a legitimate concern that such a focused analysis is given to excesses. The excesses are usually transparent, however, and I ask readers—both skeptics and others—to be on guard, to make allowances, and to restore perspectives.

Transaction cost economics is akin to orthodoxy in its insistence that economizing is central to economic organization. There are nevertheless real differences between a neoclassical production cost and the proposed governance cost orientation. But economizing, in any form whatsoever, is a purpose with which most economists agree and to which all can relate.

The proposed approach maintains that any issue that either arises as or can be recast as a problem of contracting is usefully examined in transaction cost terms. The recent "mechanism design" literature is similarly oriented to the study of contract. But there are real differences here as well. The mechanism design literature focuses on the *ex ante* (or incentive alignment) side of contract and assumes that disputes are routinely referred to and that justice is effectively (indeed, costlessly) dispensed by the courts. In contrast, transaction cost economics maintains that *the governance of contractual relations is primarily effected through the institutions of private ordering rather than through legal centralism.* Although the importance of *ex ante* incentive alignment is acknowledged, primary attention is focused on the *ex post* institutions of contract.

The behavioral assumptions I invoke in support of this approach to the study of contract are bounded rationality and opportunism. Both are intended as concessions to "human nature as we know it." Admittedly, the resulting conception of human nature is stark and rather jaundiced. Those who would emphasize more affirmative aspects of the human condition and wish to plumb features of economic organization that go beyond economizing will understandably chafe over such a choice of behavioral assumptions.

Those two behavioral assumptions support the following compact statement of the problem of economic organization: devise contract and governance structures that have the purpose and effect of economizing on bounded rationality while simultaneously safeguarding transactions against the hazards of opportunism. A relatively calculative orientation to economic organization unavoidably results—a constant concern of which is that calculativeness will be pushed to dysfunctional extremes. Subject to that caveat, I submit that any study of organization purporting to deal with economic realities must come to terms with this behavioral pair.

It is my great privilege to dedicate this book to my teachers, Kenneth Arrow, Alfred Chandler, Jr., Ronald Coase, and Herbert Simon. I had the pleasure of learning from Arrow and Simon in the classroom. Chandler and Coase have taught me mainly through their publications. Each has had a profound impact on my understanding of economic organization. This book would read very differently if the influence of any one of them were to be purged. It nevertheless goes without saying that they are neither individually nor collectively responsible for the result.

I have benefited greatly from the advice of scholars who have read various parts of the manuscript, sometimes in the form of earlier articles from which the book was shaped. Those who have read and advised me about the book in its near-final form include Henry Hansmann, Paul Joskow, Richard Nelson, and Roberta Romano. Those whose advice on parts of the manuscript or on earlier articles is acknowledged include William Allen, Masahiko Aoki, Erin Anderson, Banri Asanuma, Kenneth Arrow, William Baxter, Yoram Ben-Porath, Dennis Carlton, Frank Easterbrook, Donald Elliott, Victor Goldberg, Neal Gross, Sanford Grossman, Bengt Holmstrom, Alvin Klevorick, Benjamin Klein, Reinier Kraakman, David Kreps, Arthur Leff, Richard Levin, Paul MacAvoy, Scott Masten, Eitan Muller, Douglass North, William Ouchi, Thomas Palay, Robert Pollak, Michael Riordan, Mario Rizzo, David Sappington, Joseph Sax, Herbert Simon, Chester Spatt, Richard Stewart, David Teece, Lester Telser, Peter Temin, Gordon Winston, and Sidney Winter. I have also benefited from the reactions and advice of students during the past decade, especially those enrolled in a course on the Economics of Organization that I taught in the spring of 1984.

Although I did not realize it until much later, the book began to take shape while *Markets and Hierarchies* was still in galleys (Chapter 13, on franchise bidding, was in preparation at that time). Research during the intervening years benefited from a variety of research support—including grants from the National Science Foundation, a Guggenheim Fellowship, a year at the Center for Advanced Study in the Behavioral Sciences, the Sloan Foundation, and the Japanese Economic Research Foundation—for which I express my appreciation.

Many of the chapters are based on previously published research. They include articles and chapters of mine appearing in the *Journal of Law, Economics and Organization,* Vol. 1, Spring 1985 (Yale University Press, publisher) (Chapter 1); the *Journal of Institutional and Theoretical Economics,* Vol. 140, March 1984 (Chapters 1 and 2); the *Journal of Law and Economics,* Vol. 22, October 1979 (Chapter 3); the *American Journal of Sociology,* Vol. 87, November 1981 (© 1981 by The University of Chicago; all rights reserved; The University of Chicago, publisher), and the *University of Pennsylvania Law Review,* Vol. 127, April 1979 (Chapter 4); *Entrepreneurship* (1983), for which Joshua Ronen was the editor and Lexington Books, publisher (Chapter 5); *Weltwirtschaftliches Archiv,* December 1984 (Chapter 6); the *American Economic Review,* Vol. 73, September 1983 (Chapters 7 and 8); the *Journal of Economic Behavior and Organization,* Vol. 1, March 1980 (Chapter 9); *Firms, Organization and Labor* (1984), Frank Stephen, editor (Chapter 10); the *Journal of Economic Literature,* Vol. 19, December 1981 (Chapter 11); the *Yale Law Journal,* Vol. 88, June 1984, pp. 1183–1200 (reprinted by permission of The Yale Law Journal Company and Fred B. Rothman & Company) (Chapter 12); the *Bell Journal of Economics,* Vol. 7, Spring 1976 (Chapter 13); and *Industrial Organization, Antitrust and Public Policy* (1982), John Craven, editor (Chapter 14). I appreciate the permission of the publishers to elaborate and integrate these materials in this book.

The enterprise had the enthusiastic support of Ann Facciolo and Shelby Sola, who produced early and late versions of the manuscript, respectively. I express my thanks to both.

The involvement of Dolores and our children in the joint venture of which this book is a product defies description. Although each knows that I am enormously grateful, it bears repeating.

OLIVER E. WILLIAMSON

Contents

Prologue

Understanding the economic institutions of capitalism poses deep and enduring challenges to law, economics, and organization. The present study draws on and attempts to integrate earlier work of all three kinds. What is herein referred to as transaction cost economics is, by design, an interdisciplinary undertaking.

Contrary to earlier conceptions—where the economic institutions of capitalism are explained by reference to class interests, technology, and/or monopoly power—the transaction cost approach maintains that these institutions have the main purpose and effect of economizing on transaction costs. Legal and economic interpretations that were confidently advanced only ten and twenty years ago have had to be modified. Some have proved to be profoundly incorrect.

As the term suggests, transaction cost economics adopts a microanalytic approach to the study of economic organization. The focus is on transactions and the economizing efforts that attend the organization thereof. A transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates and another begins. With a well-working interface, as with a well-working machine, these transfers occur smoothly. In mechanical systems we look for frictions: Do the gears mesh, are the parts lubricated, is there needless slippage or other loss of energy? The economic counterpart of friction is transaction cost: Do the parties to the exchange operate harmoniously, or are there frequent misunderstandings and conflicts that lead to delays, breakdowns, and other malfunctions? Transaction cost analysis supplants the usual preoccupation with technology and steady-state production (or distribution) expenses with an examination of the *comparative costs of planning, adapting, and monitoring task completion under alternative governance structures.*

To be sure, complex organizations commonly serve a variety of economic and noneconomic purposes. That is plainly true of the economic institutions of capitalism, which are numerous, subtle, and continuously evolving. My emphasis on transaction cost aspects is not meant to suggest that transaction cost economizing is the only purpose served; but its importance has hitherto been neglected and/or undervalued. An effort to redress that circumstance is arguably warranted. I appeal to and push the logic of transaction cost economizing relentlessly—the object being to deepen our understanding and to develop the refutable implications that this point of view uniquely affords.

This book deals mainly with those aspects of transaction cost economics with which my own research has been concerned during the past decade,[1] but work on those and related matters goes back over fifty years. The decade of the 1930s is remarkable in this respect. Startling insights into the nature of economic organization were recorded in law, in economics, and in the study of organization. But the principal contributions were largely independent, and the unified concerns of the three literatures were not perceived. Partly for that reason, but mainly because neoclassical economics was such a formidable rival, transaction cost economics languished for the next thirty years.

1. Antecedents from the 1930s

1.1 *Economics*

A significant contribution to the study of economic organization that preceded the 1930s was Frank Knight's (1965) classic treatment of *Risk, Uncertainty, and Profit* in 1922. Knight plainly anticipated Percy Bridgeman's counsel to social scientists that "the principal problem in understanding the actions of

[1]This book is a lineal descendant of *Markets and Hierarchies* (1975). Readers are referred to Chapter 1 of the earlier book for a related discussion of the intellectual antecedents to transaction cost economics.

men is to understand how they think—how their minds work" (1955, p. 450). Knight had earlier acknowledged the importance of studying "human nature as we know it" (1965, p. 270) and specifically identified "moral hazard" as an endemic condition with which economic organization must contend (1965, p. 260).[2]

Knight's keen behavioral insights never gained prominence, however. Attention was focused instead on the technical distinction between risk and uncertainty that he had introduced. This is partly explained by the fact that Knight's reference to moral hazard appeared in conjunction with his discussion of insurance, where the term has a well-defined technical meaning. Its more general relevance to the study of economic organization went unnoticed. Had Knight used a nontechnical term, such as "opportunism," that has broad and recognizable significance to social and economic organization quite generally, that result might have been avoided.[3]

Another economist whose deep understanding of economic organization went largely unrecognized except among a small core of institutionalists was John R. Commons. Commons advanced the proposition that the transaction is properly regarded as the basic unit of analysis (1934, pp. 4–8). The study of trading at a much more microanalytic level of analysis was thus indicated. Commons furthermore recognized that economic organization is not merely a response to technological features—economies of scale; economies of scope; other physical or technical aspects—but often has the purpose of harmonizing relations between parties who are otherwise in actual or potential conflict (Commons, 1934, p. 6). The proposition that economic organization has the purpose of promoting the continuity of relationships by devising specialized governance structures, rather than permitting relationships to fracture under the hammer of unassisted market contracting, was thus an insight that could have been gleaned from Commons. But the message made little headway against the prevailing view that the courts were the principal forum for conflict resolution.

Ronald Coase's classic 1937 article expressly posed the issue of eco-

[2]Internal organization sometimes appears as a consequence of this condition but should not be regarded as an organizational panacea. Among the internal problems of the corporation, for example, are "the protection . . . of members and adherents against each other's predatory propensities" (Knight, 1965, p. 254).

[3]Even Coase, whose credentials for studying economic organization are impeccable, mistakenly takes issue with Knight over the efficacy of markets for information. Thus whereas Knight implicitly recognized that internal organization could arise because of problems that attend the purchase and sale of information, Coase held instead: "We can imagine a system where all advice or knowledge was brought as required" (1952, p. 346). This statement disregards the serious hazards of opportunism to which information exchange is peculiarly subject (Arrow, 1971).

nomic organization in comparative institutional terms. Whereas markets were ordinarily regarded as the principal means by which coordination is realized, Coase insisted that firms often supplanted markets in performing these very same functions. Rather than regard the boundaries of firms as technologically determined, Coase proposed that firms and markets be considered alternative means of economic organization (1952, p. 333). Whether transactions were organized within a firm (hierarchically) or between autonomous firms (across a market) was thus a decision variable. Which mode was adopted depended on the transaction costs that attended each.

A crucial dilemma nevertheless remained. Unless the factors responsible for transaction cost differences could be identified, the reasons for organizing some transactions one way and other transactions another would necessarily remain obscure. The persistent failure to operationalize transaction costs was responsible for its tautological reputation (Alchian and Demsetz, 1972, p. 783).[4] Inasmuch as virtually any outcome could be explained by appeal to transaction cost reasoning, recourse to transaction costs gradually acquired "a well-deserved bad name" (Fisher, 1977, p. 322, n. 5). Headway on these matters thus unavoidably awaited operationalization.

1.2 *Law*

The legal literature to which I have reference deals mainly with contract law, although important labor law contributions have since been made. An especially important contribution is Karl Llewellyn's prescient treatment "What Price Contract?" in 1931. Llewellyn took exception to prevailing contract law doctrine, which emphasized legal rules, and argued that greater attention should be given to the purposes to be served. Less attention to form and more to substance was thus indicated—especially since being legalistic could sometimes stand in the way of getting the job done.[5] A concept of contract as framework was advanced. Llewellyn distinguished between "iron rules" and "yielding rules" (1931, p. 729) and held that

[4]Steven Cheung contends that "Coase's argument is . . . not tautological if one can identify different types of transactions and how they will vary under different circumstances" (1983, p. 4). That is correct. But the fact is that such a discriminating effort was not prescribed by Coase, and such a need went unrecognized until vertical integration was expressly explicated in transaction cost terms (Williamson, 1971). Indeed, full operationalization required additional effort and still continues (Williamson, 1975, 1979a, 1983; Klein, Crawford, and Alchian, 1978; Klein and Leffler, 1981; Masten, 1982; Riordan and Williamson, forthcoming).

[5]As Lon Fuller and William Perdue put it, "In the assessment of damages, the law tends to be conceived, not as a purposive ordering of human affairs, but as a kind of juristic mensuration" (1936, p. 52).

> . . . the major importance of legal contract is to provide a framework for well-nigh every type of group organization and for well-nigh every type of passing or permanent relation between individuals and groups . . . —a framework highly adjustable, a framework which almost never accurately indicates real working relations, but which affords a rough indication around which such relations vary, an occasional guide in cases of doubt, and a norm of ultimate appeal when the relations cease in fact to work. [1931, pp. 736–37]

Such a concept of contract as framework is broadly consonant with process analysis of the type favored by Commons, where the study of working rules and continuity of exchange were emphasized. The convenient assumption, in both law and economics, that court ordering was routinely invoked to enforce contract was plainly challenged. The limited contractual role that Llewellyn assigned to litigation is a precursor to the more recent literature on "private ordering" (Galanter, 1981).

1.3 *Organizations*

The 1930s also witnessed the publication of Chester Barnard's important study *The Functions of the Executive* (1938). Whereas organization theorists had previously been preoccupied with creating "principles" of organization—which, it turned out, were often empirically vacuous (March and Simon, 1958, pp. 30–31)—Barnard was concerned instead with the processes of organization. The study of formal organization was emphasized, but not to the exclusion of informal organization. Cooperation was assigned a central place in the theory of organization that Barnard advanced. Express provision was made for tacit or personal knowledge.

Thus although Barnard approved of the extensive study by social scientists of "mores, folkways, political structures, institutions, attitudes, motives, propensities, instincts," he regretted that the study of formal organization had been relatively neglected (1938, p. ix); by formal organization he meant "that kind of cooperation among men that is conscious, deliberate, purposeful" (1938, p. 4). Barnard wanted greater emphasis placed on intended rationality, due allowance having been made for the limits imposed by physical, biological, and social factors (1938, pp. 12–45). What Herbert Simon subsequently referred to as "bounded rationality" (1957) was anticipated.

Effective adaptation was what distinguished successful cooperative systems from failures:

> The survival of an organization depends upon the maintenance of an equilibrium of complex character in a continuously fluctuating environment of physical,