Transaction Cost Economics and Competition Policy
Keynote Address to the Annual Conference, September 23, 2000

Paul L. Joskow
Vice-President of ISNIE

The primary objective of transaction cost economics (TCE) is to understand how variations in certain basic characteristics of transactions lead to the diverse organizational arrangements that govern trade in a market economy. The organizational arrangements that have been of primary interest include the internal organization of firms, the determinants of the boundaries between firms and markets, and the properties of contractual arrangements between buyers and sellers of goods and services. The driving force affecting the choice of governance arrangements is the desire to economize on the total costs of goods and services, including costs associated with contractual hazards and the costs of institutional arrangements designed to address such hazards.

TCE adopts a comparative institutional choice approach to analyzing alternative governance arrangements. That is, a variety of governance arrangements are available to govern resource allocation. The task is to identify the governance arrangements that best match the attributes of different types of transactions. Within the comparative institutional framework, TCE also relies heavily on an incomplete contracts approach to the evaluation of alternative contractual and organizational arrangements. The costs associated with writing, monitoring, and enforcing complete contracts, and the problems (contractual hazards) that incomplete contracts engender for harmonizing potentially conflicting interests of buyers and sellers to perform in a mutually satisfactory way as economic conditions change over time, are central to the analysis of institutional choice, behavior and performance from a TCE perspective.

As the body of theoretical and empirical work in TCE has grown, the TCE framework has been applied more widely. Not only has TCE become of central importance to theoretical and empirical work in

(continued on page 11)
All of the feedback that I have received in the Tübingen Conference is that it was a great success. Those are precisely my feelings as well. And inasmuch as the organization of ISNIE 2000, “The Economics of Institutions in the New Millennium,” was simply superb, how could it be otherwise? We are all indebted to the “German Team” (Professors Joachim Starbatty and Rudolf Richter together with Dr. Sonja Opper) who were the organizers for this event.

There were 322 participants at the conference, which is a new record. Of these, 103 were from Germany, which is a statement about the growing importance of institutional economics in Germany. A total of 40 countries were represented.

Everything seemed to come together. Not only was the event superbly organized, but the facilities were excellent. Tübingen, as we all knew (but needed to be reminded), is a beautiful city. And the weather was grand.

Outstanding keynote addresses were given by Paul Joskow, who spoke on “Transaction Costs Economics and Competition Policy,” and Reinhard Selten, whose remarks were titled “On Bounded Rationality.” Twenty-four sessions with, usually, four papers in each were organized. As we have come to expect from successive conferences, the quality of the papers continues to grow.

The Program Committee for the conference was Gary Libecap, Claude Ménard, Rudolf Richter, Pablo Spiller, and myself. My thanks to the members of the Committee for their long hours and hard work.
Why Law, Economics, and Organization?
Address to the Annual Conference, September 22, 2000

Oliver E. Williamson

It being widely conceded that law and economics is a success story and there being general agreement that parsimony is a virtue in science, any effort to expand or otherwise reshape the law and economics enterprise needs to justify itself. My primary justification for the inclusion of organization is that reliance by law and economics on the orthodox theory of the firm-as-production-function, which is a technological construction, has led to a truncated understanding of economic organization and has resulted in public policy error. Although there are reasons to believe that the worst such errors are behind us, the future will present new puzzles for which public policy error is a lurking concern. The second benefit that I associate with law, economics, and organization is educational: a more veridical theory of economic organization in which private ordering is featured will benefit the teaching of contract law and the training of what Ronald Gilson (1984) has referred to as “transaction cost engineers” in the law schools.

There are four propositions: economic organization is very complex; orthodox microeconomic theory, especially the theory of the firm-as-production-function, fails to engage and/or misconstrues some of the main purposes served by economic organization; organization theory undergirds the theory of the firm-as-governance-structure; and a wide range of contractual and organizational phenomena are better understood from the governance structure perspective. The critical concession, for law and economics scholars, is to come to terms with the fact that the orthodox theory of the firm was never designed with reference to and is often poorly suited to interpret the puzzles of firm and market organization.

In the full paper, I begin with a sketch of some of the earlier strains on antitrust law and economics. I then identify a series of key contributions from the organization theory literature which, when interpreted from a transaction cost economizing perspective, provide supports for the theory of the firm-as-governance-structure. The value added of this construction is then developed by contrasting price theoretic with transaction cost theoretic ways of dealing with a variety of public policy issues. Additional applications to the subject of contract and legal education are then discussed. Concluding remarks follow.

1. Background

Some have argued that orthodox law and economics “has no, or at least few, aspirations to change economic theory,” and that “organization theory...[adds] nothing to economics that the literature on information costs has not added years earlier” (Posner, 1993, p. 82, p. 84). A growing number of economists take issue with the latter.

The neoclassical theory of the firm-as-production-function is a technological construction in which the inner workings of firms (and other modes
of organization) are scanted. But what if economics is expected to interpret nonstandard and unfamiliar forms of contract and organization? What if economics is asked to give public policy advice on the puzzles and anomalies of firm and market organization?

Coase advised that "what is wanted in industrial organization is a direct approach to the problem. This would concentrate on what activities firms undertake,

A wide range of contractual and organizational phenomena are better understood from the firm-as-governance-structure perspective.

and would endeavor to discover the characteristics of the groupings of activities within firms.... In addition to studying what happens within firms, studies should also be made of the contractual relations between firms" (Coase, 1972, p. 73; emphasis added). But launching such a project presumes that the theoretical base is really adequate. Of the myriad of activities undertaken by firms, which are of first order importance and why?

2. Organization Theory

To incorporate the lessons of organization theory within economics, three moves are needed: (1) an identification of the key contributions, (2) choice of a productive lens, and (3) an effort to push the logic to completion. I use the lens of transaction cost economizing to interpret the key contributions from organization theory and to take the logic to completion.

On my reading, organization theory helps to reshape the research agenda by taking issue with orthodoxy in the following significant respects (Williamson, 1993, 2000): (1) the description of human actors, (2) the central problem of economic organization, (3) process transformations, (4) unit of analysis, (5) discrete structural analysis, and (6) embeddedness.

3. The Theory of the Firm-as-Governance-Structure

The theory of the firm-as-governance-structure is responsive to developments in organization theory in the following respects: It (1) works out of an incomplete contracting setup (bounded rationality) in which (2) hazards arise between bilaterally dependent parties (asset specificity) when they are (3) pushed off of the contract curve by disturbances (uncertainty), whereupon (4) the parties resort to haggling (opportunism). Such transactions invite (5) farsighted parties to relieve conflict and (6) promote cooperative adaptation by embedding the transactions in either credible contracting or hierarchical governance structures, where (7) these two governance alternatives differ in discrete structural ways, of which (8) the intertemporal burdens of bureaucracy and differential access to fiat are two.

The discriminating alignment hypothesis—that transactions, which differ in their attributes, are aligned with governance structures, which differ in their cost and competence, in a transaction cost economizing way—is the principal TCE engine for deriving refutable implications. Note for this purpose that TCE is operationalized by naming the attributes of transactions

I use the lens of transaction cost economizing to interpret the key contributions from organization theory and to take the logic to completion.

(with special emphasis on asset specificity, uncertainty, and frequency) and the syndromes of attributes that describe alternative modes of governance (incentive intensity, administrative controls, contract law regime, and adaptation).

4. Applications to Public Policy

Excepting the ideal transaction in law and economics, the neoclassical and transaction cost approaches to firm and market organization plainly differ. These differences are due to the broader conception of economic organization out of which transaction cost economics
Williamson: Why Law, Economics, and Organization? (continued)

works (where alternative modes of organization are described as governance structures, to which the lessons of organization theory apply), which differences have ramifications for public policy toward business. The overarching difference is this: orthodox economics is more imperial in that it imposes a price theoretic interpretation on the phenomena in question, whereas transaction cost economics is more curious and asks the question “What’s going on here?” The TCE action is in the details of transactions on the one hand and broadly conceived, entail? As I see it, the overarching move is to bring the lens of transaction cost economizing assiduously to bear. This will be facilitated by supplanting the academic concept of contract as legal rules by that of private ordering and by inquiring into the mechanisms through which transaction cost economizing is accomplished.

6. Conclusions

Transaction cost economics holds that the way to think about contract is to bring the purposive and farsighted lens of economizing to bear. To be sure, such a conception of contract is saturated with tension. Economizing is fundamental, but it is not the only purpose served. And pushing farsightedness to the limit runs the risk that it will be pushed beyond the limit, whereupon the “excesses” of hyperrationality are reintroduced.

Those are legitimate concerns. Judgment will be required if “other purposes” are believed to be salient. Also, the limits of farsightedness take hold sooner for consumer than for producer transactions. These precautions notwithstanding, the use of an economizing lens to examine the microanalytics of contract and organization has a good deal to recommend it.

The law, economics, and organization approach to economic organization, including the theory of the firm-as-governance-structure that is sketched herein, is an ongoing rather than finished construction. Its evolving status notwithstanding, it has already served to deepen our understanding of many complex contractual and organizational phenomena and operate as a check against overuses and misuses of orthodoxy. It is in that spirit that I recommend that mainstream law and economics

Transactions, which differ in their attributes, are aligned with governance structures, which differ in their cost and competence, in a transaction cost economizing way: this is the principal TCE engine for deriving refutable implications.

governance structures on the other, which is closer in spirit to organization theory.

Transaction cost economics maintains that any issue that arises as or can be posed as a contracting problem can be examined to advantage in transaction cost economizing terms. Accordingly, the reach of transaction cost reasoning is virtually endless. My full paper examines the public policy issues of vertical integration/vertical market restraints, the “new economy,” regulation/deregulation, and corporate governance/debt and equity. It compares and contrasts neoclassical and transaction cost interpretations of contracting practices and organizational structures.

5. Contract and Economic Organization

If the contractual approach to economic organization has the reach that I ascribe to it, then the systematic application of TCE to legal education and to legal and economic research on contracting holds out considerable promise. So what does a combined law, economics, and organization approach to the study of contract, orthodox economics is more imperial in that it imposes a price theoretic interpretation on the phenomena in question, whereas transaction cost economics is more curious and asks “What’s going on here?”
Williamson: Why Law, Economics, and Organization? (concluded)

stands to benefit by incorporating the lessons and some of the methods of law, economics, and organization—both as these bear on public policy and in relation to the law school curriculum.

Notes

The author is Edgar F. Kaiser Professor of Business Administration, Professor of Economics, and Professor of Law at the University of California, Berkeley. This is excerpted from a paper presented at the opening plenary session of the fourth annual conference of the International Society for New Institutional Economics in Tübingen, Germany, September 22, 2000. Copyright © 2000 by Oliver E. Williamson. The full text of the paper is available in the SSRN Electronic Paper Collection: http://papers.ssrn.com/aper. It is also available at http://www.haas.berkeley.edu/bpp/oew. Address e-mail to owilliam@haas.berkeley.edu.

References


Message from the President (concluded from page 2)

There being a large number of excellent submissions, we needed to make some difficult choices.

Turning to organizational matters with ISNIE this past year, I am pleased to report that the Board of Directors asked Claude Ménard to serve as President-Elect for the year 2000-2001. He has agreed and will become President at the close of the annual meeting next September.

The Board of Directors also revised the by-laws. Beginning this past fall, members are being asked to vote annually by mail ballot on the office of Vice President and to elect three members of the Board of Directors. Members of the Board will serve for three-year terms. The elected Vice President will become President-Elect and President on successive years. The Board will be chaired by the President and will have twelve members: the three officers (Vice President, President-Elect, President) and nine elected members. Keep in mind, as you cast your ballots, that ISNIE is a very interdisciplinary society, which is reflected in our research and should be reflected also in the composition of the Board.

Members of the current Board of Directors who are completing their terms and to whom I express thanks are Benito Arruñada, Harold Demsetz, John Drobak, and Barry Weingast. All have been instrumental in getting us through our initial start-up. Who could have imagined, when we first met in St. Louis in 1997, that we would grow so vigorously in the short period of three years.

The next annual meeting will be at Berkeley, California. It will begin with an evening meeting on Thursday, September 13, and will conclude on Saturday afternoon, September 15. In view of facilities constraints, attendance will be capped at 300—so make your plans to attend early.

Vital financial support from the Bradley Foundation (for general ISNIE purposes) and from the Earhart Foundation (for funding to support fellows from transitional and developing countries to attend the annual conference) is gratefully acknowledged. I, along with the entire membership, look forward to another banner year.
CALL FOR PAPERS

Annual Conference of the
International Society for New Institutional Economics (ISNIE)
September 13-15, 2001
Berkeley, California, USA

Institutions and Governance

The International Society for New Institutional Economics (ISNIE) will hold its Fifth Annual Conference at the University of California at Berkeley (USA) on September 13-15, 2001. The keynote speakers will be Bengt Holmstrom and Vernon Smith. In addition to economics, the conference program will include sessions on the application of NIE to political science, anthropology, law, and sociology. The program committee, chaired by President-Elect Claude Ménard, invites you to submit your proposal to present a paper at the conference.

Proposals

Proposals are due by March 1, 2001. They must be no longer than two pages, double spaced. Authors must also send a short one-paragraph biosketch or curriculum vitae including telephone, fax, e-mail, postal address, and current employment. You must be a current member of ISNIE to submit a proposal. Please send your proposal (as a Microsoft Word document) to

isnie2001@wueconc.wustl.edu

About ISNIE

The International Society for New Institutional Economics aims to bring together scholars from all over the world who are unified by two propositions: institutions matter, and institutions are susceptible to analysis. Both the rules of the game (of formal and informal kinds) and the play of the game (through the institutions of governance—of both private and public kinds) are the object of analysis. This is a combined theoretical, empirical, and public policy undertaking in which political scientists, sociologists, anthropologists, lawyers, and economists are joined.

Studies of the following subjects are within the scope.

1. Economic Development and Reform
2. Property Rights
3. Contract and Organization
4. Regulation and Deregulation
5. Economic Transition
6. Network Forms
7. Positive Political Theory and Policy
8. Transaction Costs: Governance
10. Experimental Institutional Economics
11. Evolutionary Economics
12. Corporate Governance
13. Competition Policy
14. Economics of Corruption
15. Informal Organization
16. Strategic Behavior and Organization
17. Law and Institutions
18. Other

Please indicate the categories to which your proposal most applies.

Registration Information

Registration for the conference will open April 1, 2001. The registration fee will be $200 US before July 1, 2001 and $300 US after July 1, 2001. To register, you must be a current member of ISNIE, with your membership dues paid for 2001. For additional information on membership and registration, see the forms in this newsletter or go to http://www.isnie.org.
German Press Review of ISNIE 2000:  
“A Look Under the Hood of the Economy’s Engine —  
The Institutional Economists Want to Revitalize Their Guild”  
(Excerpted from the Frankfurter Allgemeine Zeitung, October 2, 2000)

Karen Horn

The promising and quickly growing group of “new institutional economists” who met recently in Tübingen for their fourth international conference should be taken seriously.

Oliver Williamson (University of California, Berkeley), president of the International Society for New Institutional Economics (ISNIE), said in Tübingen that for the new economists it’s not about defaming the conventional methods of analysis as useless. “It can only be about adding to the standard theory and reaching beyond it in a way that makes sense,” and this with conscious consideration of the rules that affect people’s behavior. These conditions include laws, informal norms, conventions, customs and practices — in short, institutions. This requires a deeper understanding of human interaction. As Paul Joskow (MIT) puts it, “In neoclassical economics it’s all about whether or not the car runs. We, in contrast, lift the hood and look at how it runs.”

The critique that neoclassical thinking is based on static models in equilibrium is high up on the list of complaints. As Douglass North (Washington University in St. Louis, Nobel Prize winner in 1993) emphasized, the world is constantly in motion and hardly any question could be more exciting than what laws such a dynamic — in fact evolutionary — process obeys. The economic and social constructions in countries such as China, Russia, and Argentina were a rich source for discussions at the conference.

It has proved important to research the origin of human preferences and how they change — and not just the logical forms of cooperative or non-cooperative interaction. “We have to finally achieve some clarity about how people’s beliefs come about. Otherwise we’ll never understand how things like the rise and fall of the Soviet Union come about,” said North.

Reinhard Selten (University of Bonn, Nobel Prize winner in 1994) has long dedicated himself to research on human preferences. With the help of games comprised of questions he demonstrated in Tübingen how complexity, strategic sequencing, and the way in which questions are framed can affect people’s perceptions and influence their answers.

Karen Horn, an ISNIE member, writes for the Frankfurter Allgemeine Zeitung, a leading daily newspaper in Germany with readers in 148 countries. The original article appeared on page 18 of the October 2, 2000 issue. Address e-mail to k.horn@faz.de.

Global Development Network Meets in Japan, Awards Prizes

The Global Development Network (GDN) held its second annual conference in Tokyo on December 11-13, 2000. A worldwide association of research and policy institutes concerned with the field of development, the GDN sponsors research grant competitions, comparative research projects, networking, and training.

The theme of this year’s conference was “Beyond Economics: Multidisciplinary Approaches to Development.” Douglass North and Amartya Sen were featured speakers, and around 400 experts on development attended. Several ISNIE members took part in the proceedings. Andrei Shastitko chaired a session on NIE at which Philip Keefer, Claude Ménard, and Mary Shirley presented papers and Douglass North was a discussant. Lee Benham and Alexandra Benham presented material at the Knowledge Fair.

Prizes of $10,000 and $5,000 were awarded to the best research papers, submitted by researchers from developing and transitional countries, on each of five themes, including the theme “institutional dimensions of a market economy”. Two prizes of $125,000 were also given, for outstanding research on development and for the most innovative development project. A similar competition will be held in 2001. For further information, see http://www.gdnet.org.

NIE Conference in Brazil Planned

The Second Brazilian Conference on NIE will take place March 20-22, 2001 at the Campinas State University, São Paulo, Brazil. Topics to be addressed range from corporate governance to economics and organizations to innovations, institutions, and economic development. The conference is sponsored by five universities and foundations, and 50 papers chosen competitively will be presented. Walter Belik is chair of the organizing committee. For further information, contact sbnei@eco.unicamp.br.
ISNIE Officers and Directors Announced

The ISNIE Board of Directors last year amended the by-laws in order to give the members of the Society the power to elect officers and Board members. When the Society was established as a nonprofit corporation in 1998, the Board was assigned the authority to elect new Board members, in order to maintain continuity during the formative stage. The Society has now grown to a large, stable membership and achieved a permanency that makes governance by the members appropriate. The first members’ election of ISNIE officers and Board members, held under the revised by-laws, took place via e-mail at the end of 2000.

Paul Joskow was elected Vice-President. Under the new by-laws, he will become President-Elect in 2001-2002, and will serve as President in 2002-2003.

Members also voted for three Board Directors, electing Benito Arruñada, Avner Greif, and Gary Libecap to three-year terms. Terms expired in 2000 for Harold Demsetz, John Drobak, and Barry Weingast. Members of the Board continuing in office are Lee Benham, Ronald Coase, Scott Masten, Douglass North, Rudolf Richter, and Mary Shirley. The three principal officers of ISNIE also serve as Board members.

Contracting and Organizations Research Initiative Creates Online Library

To promote interdisciplinary empirical research about the structures of economic exchange and organization, the Contracting and Organizations Research Initiative (CORI) is creating a contracts database publicly available over the Internet. CORI, based at the University of Missouri, Columbia, USA, is developing and publishing an Internet-based library of contract documents, indexed with related business and legal information. At present the collection is primarily drawn from filings with the U.S. Securities and Exchange Commission. Full-text searches of the collection and of subcollections by contract type are now possible. Proposals to expand the collection to 200,000 contracts from a great variety of sources are under review.

CORI will also develop a system for classifying contracts, software for retrieving and analyzing them, and links to other retrieval systems and databases. Michael Sykuta is a co-director of the project, and Ronald Coase chairs the Advisory Board. The digital collection of contracts is currently accessible online and is searchable at http://cori.missouri.edu.

Ronald Coase Institute Is Launched

The Ronald Coase Institute has recently been created to support and encourage research in NIE. It will promote careful and useful analysis of the institutions that govern real economies and raise transaction costs.

The individuals who have started the Institute – Mary Shirley, Alexandra Benham, Lee Benham, Claude Ménard, and Douglass North, with Ronald Coase serving as research advisor – were earlier involved in the creation of ISNIE. “This initiative is part of our common efforts to build a vibrant scholarly community and a body of excellent research in NIE. The Ronald Coase Institute does not have members, just a small management team. We invite interested ISNIE members to become our collaborators, advisors, and future candidates for support,” says Mary Shirley, President of the Institute.

As funding becomes available, the Institute will select outstanding young scholars with an interest in understanding rules and policies and their consequences. It will support their research over time and involve them in a community of outstanding scholars working in NIE. It will help them communicate their findings widely, and encourage collaboration across countries and disciplines. For further information, see http://www.coase.org.
Reflections on ISNIE 2000: A Personal Perspective

Andrei Shastitko

ISNIE 2000 was extremely useful in stimulating further research and creating new ideas for teaching NIE. I’d like to mention some aspects which I find most valuable.

1. The conference exhibits the new frontiers and achievements of NIE as a research program. The ISNIE conferences are highly concentrated events, offering imaginative insights and differing approaches concerning recent and future research. Such panels as “Competing Theories,” “Incentives and Contracting,” “Economic Reforms in Russia,” and “Institutional Perspectives” add detail and update my understanding of vertical integration as a multi-dimensional phenomenon, trust as a fundamental factor of co-operation, and the comparative advantages of different pricing rules from the efficiency perspective.

Roundtable discussions like the “Evolutionary Panel: How Evolutionary Is New Institutional Economics, and Why Has Evolutionary Economics Been So Hard to Operationalize?” are important in many ways. First, they let me compare directly the opinions of NIE leaders on key questions for our research program. Second, there is the opportunity to witness and participate in the discussion. This allows me to identify areas of agreement and of dispute concerning key concepts and dimensions of research. Third, it allows me to check once more my own findings in this field.

The combination of empirically oriented presentations in panels and discussion of methodological issues in plenary sessions is an important design element in the annual ISNIE market of ideas.

2. There is a unique opportunity to meet new and old acquaintances to discuss professional questions and coordinate future plans. Face-to-face meetings not only economize on arrangement time but are very stimulating for individual and joint research. I’d like especially to mention discussions with Lee and Alexandra Benham, Edward Elgar, Claude Ménard, Jean-Philippe Platteau, Mary Shirley, and Katalin Szabo.

3. The keynote lecture by Paul Joskow was highly important for me as a researcher working on the problems of competition and antitrust policy. This lecture creates a good benchmark for papers being prepared in this field for the Ministry of Antimonopoly Policy of the Russian Federation.

4. Now that Institutional Economics is being widely introduced into the curricula of Russian universities, these annual ISNIE conferences are especially important to my colleagues and me to augment our course instruction.

5. This was my first time presenting a paper at an ISNIE conference. The questions raised by discussants and audience highlighted which arguments require further elaboration, and which aspects of the theme are most interesting.

Andrei Shastitko is affiliated with Moscow Lomonosov State University and the State University - Higher School of Economics, and is sector chief for Competition and Antimonopoly Policy at the Bureau of Economic Analysis Foundation. He has written many papers on NIE. He attended ISNIE 2000 as an Earhart Scholar, and has been present at every ISNIE conference but the first. Address e-mail to shastitk@beap.dol.ru.

Earhart Scholars Attend ISNIE 2000

A generous grant from the Earhart Foundation again made possible the attendance of many scholars from developing and transitional countries. Thirty-two scholars were supported by the Earhart funds plus some matching contributions from the State University Higher School of Economics in Moscow. Further funds from the DAAD and DSE in Germany brought six additional scholars to Tübingen.

Nineteen countries were represented: Albania, Bangladesh, Bulgaria, China, Czech Republic, former Yugoslavia, Germany, Hungary, India, Kenya, Lebanon, Pakistan, Philippines, Poland, Romania/Canada, Russia, Spain, UK, and Uzbekistan.
Joskow: Transaction Cost Economics and Competition Policy (continued)

industrial organization, but the TCE framework developed to apply to firms and markets has been extended to understand the structure and performance of non-profit organizations, government bureaucracies, political and legal institutions.

TCE has always had a policy dimension as well, especially applications to antitrust and competition policies. The primary objective of transaction cost economics (TCE) is to understand how variations in certain basic characteristics of transactions lead to the diverse organizational arrangements that govern trade in a market economy.

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policies. The full title of Oliver Williamson’s seminal work is Markets and Hierarchies: Analysis and Antitrust Implications. Moreover, antitrust and competition policy issues have continued to be included in Williamson’s research portfolio. However, I think that it is fair to say that TCE has been less concerned with policy applications than has the field of industrial organization more generally (antitrust and regulatory policies).

In a paper that I published in 1991 I argued that TCE has important implications for evaluating and reforming antitrust and regulatory policies. However, while TCE appeared to have had a significant impact on antitrust policy, especially in the significant changes in antitrust treatment of vertical integration and vertical contractual arrangements in the U.S. during the 1980s, I suggested that its influence may have been less significant than might first meet the eye. In that paper I also argued that the TCE framework would be especially useful in designing and evaluating alternative approaches to privatizing and restructuring important industrial sectors that had historically been considered to be natural monopolies and subject to price and entry regulations, in an effort to promote competition in one or more horizontal segments of these industries. These industries included telecommunications, electric power, natural gas transportation, and railroads. In 1991, the reform initiatives in these industries were still very young in the countries where they had been implemented and their future in many other countries uncertain. I also suggested that proceeding with restructuring, regulatory and competition reforms in these sectors without taking account of TCE considerations was likely to lead to serious problems with the performance of these reform initiatives.

Overview

In the full text of this paper, I revisit a number of the competition policies that I addressed in my 1991 paper with the benefit of a decade of new research, many policy changes, and additional experience with their consequences. The primary focus is on antitrust policy in the U.S. I first discuss U.S. antitrust enforcement institutions and their implications for the specification of antitrust legal rules. Just as firms take TCE considerations into account in choosing governance arrangements, I argue that antitrust legal rules must be sensitive to the attributes of the institutions that we rely upon to enforce antitrust policies, their capabilities, the uncertainties associated with the diagnosis and mitigation of market power, and the associated costs of Type I and Type II errors. Modern economic theories regarding imperfect competition, strategic behavior, and market power alone cannot be relied upon to produce sound legal rules. Sound economic theory must be used along

The task is to identify the governance arrangements that best match the attributes of different types of transactions.

with the transactional attributes of the antitrust enforcement hierarchy and empirical evidence on the relationship between firm and market structure, governance arrangements, and market performance, to yield sound legal rules.

I next discuss so-called “post-Chicago antitrust law
Joskow: Transaction Cost Economics and Competition Policy (continued)

and economics,” its relationship to TCE, and its contribution to the development of sound antitrust legal rules. I argue that “post-Chicago antitrust law and economics” has ignored many of the teachings of TCE

The TCE framework is especially useful in designing and evaluating alternative approaches to privatizing and restructuring industrial sectors that were historically considered to be natural monopolies.

and failed adequately to integrate “good economics” with the transaction cost attributes of antitrust enforcement institutions. As a result, “post-Chicago antitrust law and economics” alone cannot and has not led to sound antitrust legal rules. Good antitrust legal rules must take account of sound microeconomic theory, associated empirical work, and the transaction cost attributes of antitrust enforcement institutions. I then explore these issues in the context of a particular antitrust case (Kodak v. Image Technical Services) and its progeny which advocates of “post-Chicago antitrust law and economics” point to as one of its important contributions to antitrust policy.

The paper then turns to a discussion of divestiture as an antitrust remedy and examines the results of a recent FTC study of divestitures ordered in connection with its reviews of horizontal mergers. I argue that the results of this study show that the failure of the FTC to adopt a TCE perspective in fashioning divestiture orders and approving the associated asset sales agreements is at least partially responsible for many of the problems observed. I urge caution in applying divestiture remedies more widely at least until the enforcement agencies develop a better understanding of the factors that need to be taken into account to craft and administer successful divestiture orders and show that they can apply this new learning successfully in practice.

I next examine some of the problems that have emerged in connection with vertical and horizontal restructuring of electric power sectors to promote competition in the electricity generation segment. I argue that many of these problems could have been predicted and possibly avoided if the theory and empirical knowledge developed by TCE had been applied more widely in designing these industry restructuring and regulatory reform initiatives.

Reforms in the Electricity Sector

One of the most important sets of changes in industrial organization that has taken place around the world in the last 15 years is associated with the restructuring of industries which were historically considered to be natural monopolies and were subject to price and entry regulation (and often publicly owned as well). These industries include telecommunications, electric power, natural gas transportation, and railroads. The primary goals of these restructuring initiatives have been to promote competition in those horizontal segments of these industries which are conducive to it, to shrink the scope of regulated monopoly, and to introduce new regulatory mechanisms for residual regulated monopoly segments to provide better incentives for cost reduction and efficient pricing.

In my 1991 paper I argued that transaction cost economics provides an indispensable set of tools for understanding how the organizations subject to reform have emerged and how they are likely to respond as economic and regulatory conditions change. A major

Antitrust legal rules must be sensitive to the attributes of the institutions that we rely upon to enforce antitrust policies, their capabilities, the uncertainties associated with the diagnosis and mitigation of market power, and the associated costs of Type I and Type II errors.
thrust of these restructuring initiatives has involved vertical separation of potentially competitive (e.g. electricity generation) from natural monopoly segments (e.g. electricity transmission). It has been my view that there are very sound TCE reasons why these industries evolved with vertically integrated structures. Moreover, vertical restructuring to promote competition in certain horizontal segments must necessarily confront a tradeoff between the potential benefits of market forces replacing inefficient regulated monopolies and the potential costs associated with contractual hazards arising from vertical disintegration. The challenge for the development of new governance arrangements in these industries is to keep the costs of vertical separation low without seriously undermining the benefits of competition. These challenges are especially great when the performance of the competitive segments (e.g. generation) depends critically on the details of relationships with segments that continue to be regulated monopolies (e.g. transmission) which buyers and sellers in the competitive segments depend upon to support competitive trading relationships.

We now have an additional decade of experience with industry restructuring in these segments since I made these observations in 1991. Let me focus here on the experience with electricity sector reforms which I follow most closely. While the electricity sector reform programs in many countries have been successful in the sense that the benefits of the reforms exceed the costs of the reforms, a number of common problems have emerged in many of them. They include:

- Local market power problems
- Management of network congestion
- Market performance problems when supplies of generation service are very tight
- Coordination of transmission and generation investments.

Many policymakers and fellow travelers have been surprised by how difficult it has been to create competitive wholesale electricity markets that are not plagued by problems. However, had policymakers viewed the restructuring challenge using a TCE framework, these potential problems are more likely to have been identified and mechanisms adopted ex ante to fix them. Instead, the restructuring programs have often gone forward (a) assuming that there were no economic efficiency reasons for why vertical integration between generation and transmission was the way electricity sectors evolved everywhere on earth and (b) ignoring the configuration of long-lived sunk investments in the existing system and its implications for competitive market behavior in physical (spot) electricity wholesale markets. Had these factors played a more central role in the reform process, some of the most serious problems could have been avoided or their costs reduced.

The application of TCE analysis also leads to suggestions for improving performance. It is becoming increasingly clear that unregulated wholesale electricity markets work best when transmission congestion and constraints do not place significant limitations on the number of generators which can compete to serve demand and provide reliability to the network at specific locations. This suggests that the successful development of competitive wholesale electricity markets requires “overinvestment” in transmission capacity compared to a governance structure that relies on vertically integrated monopolies subject to regulation. The cost of “overinvestment” in transmission is a cost that must be paid to create competitive electricity markets that (we hope) will lead to lower cost outcomes in other dimensions in the long run than did the institution of vertically integrated monopoly.

**Conclusion**

TCE clearly provides theoretical tools and a large body of empirical research that can be very helpful in the formation of competition policies, whether they involve antitrust policy or industry restructuring to promote competition in sectors that were previously occupied by
regulated monopolies. However, it still appears to me that TCE is not being utilized nearly as much as it should be in these policy arenas. It would be useful to understand better why this is the case.

Let me conclude with a hypothesis of one factor that may be a contributing factor to this state of affairs. Academic economists do not make public policy directly. They contribute to public policy through their writing, through their participation in public policy formation as commentators and consultants, and through their

**TCE is not being utilized nearly as much as it should be in the formation of competition policies.**

effects on the education of lawyers, judges, business people, and politicians who have a stake in and are directly involved in policy formation and application. Few of these people have graduate degrees in economics. Many of them took some economics as undergraduates and may have taken intermediate microeconomics and industrial organization courses as well in law or business school.

TCE has certainly matured to the point where it is widely taught to PhD students in economics, political science, management and other disciplines. And it has clearly had an impact on the way scholars in these and other areas (e.g. law) think and write about markets and organizations for wider audiences. I was curious to see, however, whether TCE had yet made its way into mainstream undergraduate education, recognizing that it can take decades for new intellectual developments to make their way into mainstream “orthodox” undergraduate education. I have performed a casual survey of leading contemporary economics textbooks used to teach undergraduate principles, intermediate microeconomics, and industrial organization courses in the U.S. I was surprised to find that there is hardly a trace of TCE theory or empirical analysis in these texts. Indeed, it is striking how little the teaching of undergraduate microeconomics has changed in the last 30 years. Firms are still production functions seeking to minimize costs given input prices. Market transactions are anonymous spot market trades. The leading undergraduate industrial organization textbooks do cover some issues of concern to TCE and incorporate some theoretical and empirical research drawn from TCE, especially regarding vertical integration. However, TCE’s presence in these texts is certainly not overwhelming. The primary focus is on traditional topics of monopoly, oligopoly, price discrimination, natural monopoly and relatively superficial treatments of antitrust and regulatory policy. My hypothesis is that the failure of TCE to as yet become better integrated into mainstream undergraduate economics education is one of the reasons why its contribution to competition policy and other public policy areas has not been greater. It seems to me that one of the challenges for those of us who work in the TCE tradition, especially now that it has become a mature and widely diffused area of academic research, is to find ways to bring this learning into the mainstream of undergraduate and professional school education in economics.

Notes

The author is Elizabeth and James Killian Professor of Economics and Management and Director, MIT Center for Energy and Environmental Policy Research at the Massachusetts Institute of Technology. These remarks are excerpted from a keynote lecture at the annual conference of the International Society for New Institutional Economics in September 2000 in Tübingen, Germany. Copyright © 2000 by Paul L. Joskow. For the complete text of this paper, see http://web.mit.edu/pjoskow/www/papers.html. Address e-mail to pjoskow@mit.edu.

Footnotes


You are cordially invited to participate in the next annual ISNIE conference, which will be held at the University of California at Berkeley, California, USA, under the presidency of Oliver E. Williamson. It will begin Thursday, September 13 with a plenary session starting at 5:30 p.m. During the following two days there will be parallel sessions at which proposed papers, accepted by the Program Committee, will be given. Keynote addresses will be given by Bengt Holmstrom and Vernon Smith. The traditional conference dinner will be held Friday night. The conference will end Saturday, September 15 at 5:30 p.m.

You are invited to submit your proposal to present a paper by March 1, 2001. For further details see the Call for Papers in this newsletter or at http://www.isnie.org.

Among the areas of interest are the New Institutional Economics of:

- Transition
- Development
- Organization
- Contracts
- Property Rights
- Positive Political Theory
- Institutions and Game Theory
- Transaction Costs
- Informal Organizations
- Regulation and Reform
- Experimental Economics
- Evolutionary Economics
- Law and Institutions
- Positive Political Theory
- Institutions and Game Theory

Conference registration will start April 1, 2001. The registration fee will be $200 US before July 1, 2001 and $300 US after July 1, (if space is still available). The fee includes lunches, coffee breaks, and the conference dinner. Before August 15 the cancellation fee is $100 US; after August 15 no refunds will be given. Use the registration form in this newsletter, or go to http://www.isnie.org for conference and membership information. You can download and print the forms from that site. To register, you must be a member of the Society, with your dues paid for the year 2001. All past conferences have been oversubscribed. Only 300 places are available this year, so the earlier you can register, the better.

Berkeley is situated in the beautiful Bay Area of northern California, across the water from San Francisco. It is famous for the University of California at Berkeley, a major influence in the city, and for social, cultural, and culinary diversity. The university campus, begun in 1868, is located on 1,350 acres in the heart of the city (see http://www.berkeley.edu). Outstanding restaurants abound in the area, the birthplace of California cuisine. Parks, forests, bay, ocean, and hills offer recreation. San Francisco is a short journey away via subway or via the San Francisco-Oakland Bay Bridge. For information on travel, hotels, restaurants, and attractions in the East Bay area (where Berkeley is located) and also San Francisco, see the Web sites http://www.berkeleycvb.com and http://www.sfgate.com/traveler/guide.

Conference participants must make their own travel and hotel arrangements. If you are coming from abroad, please check whether you will need a visa to enter the USA, and if so, apply in timely manner. A limited number of hotel rooms will be available at special rates at various hotels in Berkeley. Shuttle buses will link the more distant hotels with the conference site. Detailed information on hotels will be sent later to ISNIE members and potential attendees, and posted on the ISNIE Web site. Demand for hotel space in the area is intense, and the rooms at special rates are likely to sell out early, so please reserve your room promptly. Prices are in the moderate to expensive range.

To reach Berkeley, the closest airports are Oakland Airport and San Francisco International Airport. San Jose International Airport also serves the area. Airport shuttle buses, taxis, and public transportation offer ground connections to Berkeley. From Oakland Airport, you can take a BART train or shuttle bus; from San Francisco International Airport, a shuttle bus. For more details, see http://www.sfgate.com/traveler/guide/transportation/airports.
2001 Membership Application/ Renewal for the Current Year
International Society for New Institutional Economics

Membership in the Society is open to everyone interested in the New Institutional Economics, regardless of academic discipline or professional employment. Membership is for the calendar year January 1 to December 31. Only current members may submit proposals and attend the annual conference. Members receive a subscription to the ISNIE Newsletter and will be included in the NIE Network, a Web-based directory and information service.

The annual membership fee is $40 US for individuals in Andorra, Australia, Austria, Bahamas, Belgium, Bermuda, Brunei, Canada, Cayman Islands, Denmark, Finland, France, French Polynesia, Germany, Hong Kong, Iceland, Iran, Ireland, Israel, Italy, Japan, Liechtenstein, Luxembourg, Monaco, Netherlands, New Caledonia, New Zealand, Norway, Qatar, San Marino, Singapore, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, and the United States. For individuals in all other countries, the annual membership fee is $20 US. For students submitting a letter from their department verifying student status, the annual fee is $20 US.

To join the Society, fill out a copy of the form below (please type or print clearly) and send the completed form, along with your VISA credit card information or your check drawn on a U.S. bank in U.S. dollars, to:

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You must be a current member of ISNIE to register for the conference.
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