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RESEARCH ARTICLE

Adaptation, adjudication, and private ordering: Contractual Relations through the Williamson Lens

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Abstract

Williamson's legacy will be permanently, and deservedly, linked with the theory of the firm. As important, however, is his contribution to our understanding of contracting. My aim here is to describe Williamson's conception of contracting, how it differs from other approaches to contracting, and some implications of that approach for contract design and enforcement. I argue that Williamson's 'process orientation' – in which the main dimension along which contracts vary is the extent to which contract adjustments are effected through court ordering *versus* private ordering – provides alternative interpretations of some conventional contract terms but also sheds light on some otherwise puzzling contractual phenomena.

Keywords: Contracting; Oliver Williamson; transaction cost economics

JEL codes: B25; D23; D86; K12; L14

1. Introduction

Early in my career, I attended a conference at which Oliver Williamson served as discussant for a paper the author described as an application of Williamson's transaction cost theory. Although the paper's subject was an organizational arrangement of interest to transaction cost economists, and its logic wasn't necessarily wrong, I struggled to see a connection between the analysis in the paper and what I understood to be Williamson's framework. My perception being less keen than Williamson's, I looked forward to hearing how he would reconcile the author's analysis with a transaction cost orientation. It was mildly reassuring, then, when Williamson opened his comments by saying that he was unable to do so, after which he proceeded to recast the issues raised in the paper 'viewed through the lens of transaction cost reasoning'.

As those familiar with his work know, Williamson often used this lens metaphor – most commonly in the form 'the lens of contract' – in describing his approach to the analysis of organizations and institutions.[1] Williamson's optical allusion served to convey that, more than just an extension of price theory to the choice of governance arrangements, transaction cost reasoning represented a distinct orientation, a different perspective on governance. Williamson devoted virtually all of his efforts subsequent to *Markets and Hierarchies* (1975) to developing and pushing the logic of transaction costs. Among the features of the orientation that emerged from those efforts, two aspects perhaps stand out. The first is the identification of adaptation as the central problem of organization: it is only in the presence of change and uncertainty that the choice of governance arrangements becomes significant. As he puts it, 'Transactions conducted under certainty are relatively uninteresting. Except as they differ in the time required to reach an equilibrium exchange configuration, any governance structure will do'

[1]The quotation in the preceding paragraph, Williamson's earliest use of the lens metaphor that I could find, appeared in Williamson (1981: 572). Williamson (1985a: 29, 1985b; 2002: 48; *inter alia*) attributed the 'lens of contract' formulation to Buchanan (1975).

(1979: 253–254). The second is the imperative of comparative analysis: persistently asking why an outcome cannot be accomplished another way leads eventually to a focus on the ultimate impediments to the realization of any and all benefits of cooperation.

Williamson developed and applied his framework most famously in the context of the theory of the firm. As important, however, was his contribution to our understanding of contracting. 'The question of why there is so much vertical integration remains interesting', he allowed, 'but no more so than why there are so many market- (and quasi-market) mediated transactions' (1979: 234). My aim here is to describe my understanding of Williamson's conception of contracting, how it differs from other approaches to contracting, and some implications of that approach for contract design and enforcement.[2] I argue that Williamson's 'process orientation' – in which the main dimension along which contracts vary is the extent to which contract adjustments are effected through court ordering *versus* private ordering – provides alternative interpretations of some conventional contract terms but also sheds light on some otherwise puzzling contractual phenomena.

2. Contracting viewed through Williamson's lens

Another anecdote (if I may) reveals much of Williamson's approach. During my last years as a graduate student in the University of Pennsylvania Economics Department (fall 1979 to spring 1982), I attended Williamson's industrial organization workshop (rechristened the transaction cost economics workshop under terms of a Sloan Foundation grant). In addition to more traditional industrial organization topics, presentations included much of the newly emerging research on contracting and the firm. Among the regular attendees in the early part of this period was a brash, newly-minted Chicago Ph.D. by the name of Sanford Grossman. As time passed, a pattern quickly emerged. The speaker would introduce a model demonstrating some inefficiency associated with the phenomenon under consideration, at which point, Grossman would interrupt to inquire why the model's actors did not simply write a contract of a specific form that would eliminate the inefficiency. To salvage the rest of the presentation, the author would inevitably resort to positing some cost – information, contracting, bargaining, or the like – that stood to forestall such an arrangement. Whereupon Williamson would interject that, given that transaction costs were the ultimate source of the inefficiency, the focus of the presenter's analysis should be on the incidence of those costs.[3]

These exchanges captured to a large extent the core logic of Coase (1960) that underlies transaction cost economics: by definition, the existence of substantive inefficiencies implies the existence of mutually beneficial cooperation. If self-interested parties failed to take advantage of such gains, it must be because they faced some impediment to doing so. 'Transaction costs' is (for better or worse) simply the name we have come use for those impediments.

Mutually beneficial cooperation presumes some understanding among the relevant parties, but securing those understandings does not necessarily require contracting. Although much of the economics literature uses the term contract for any type of agreement, a contract, properly understood, is a formal (although not necessarily written) legal commitment, a promise for which the parties have recourse to

[2]For other, not necessarily incompatible, perspectives on Williamson's contributions to contract theory see Gibbons (2021) and Ménard (2021) in this issue.

[3]So influential on my early intellectual development were these seminars that I found myself taking increasingly more provocative positions with my classmates. One such incident – illustrating a lesson on the usefulness of tautologies that I also learned from Williamson – occurred at the weekly post-workshop dinners that we doctoral students held to discuss the workshop presentations among ourselves. After one particularly stimulating presentation, I felt emboldened to make the claim that 'all interesting issues in economics turn ultimately on transaction costs'. Taking the dare, my dinner companions offered up a series of challenges, the first few of which I fended off successfully. As Michael Waldman later recollected the episode (personal correspondence, June 21, 2000):

> You challenged me and Tom [Ross] to come up with some 'interesting' issue in economics that is not fundamentally a transactions cost topic. We suggested a number of topics each of which you successfully argued was a transactions cost topic. I then suggested the topic of comparative advantage at which point you hesitated and then replied that comparative advantage is not interesting. I am still not sure who 'won' the argument.

court enforcement. 'Breaching a contract' differs from 'canceling an order', to use Stewart Macaulay's dichotomy (1963: 61; cited in Williamson, 1983: 521).[4] A theory of contracting thus needs first to address why parties would want (or need) to make their agreements legally enforceable rather than govern their relationship some other way, and only then to identify the factors affecting their choice of contract terms.

Williamson's earliest transaction cost writings identified contracting as a potential response to costs associated with small-numbers bargaining (e.g. 1971, 1976), and both the role of contracts in protecting 'idiosyncratic investments' and the limitations of contracting – especially the infeasibility of complete contingent-claims contracts – in complex and uncertain environments featured prominently in *Markets and Hierarchies* (1975). But, it was not until his seminal 1979 article, subtitled 'The Governance of Contractual Relations', and a roughly contemporaneous but less well-known paper (with Michael Wachter) on 'Obligational Markets and the Mechanics of Inflation' (1978), that contract design and its relation to the legal system became a central focus of Williamson's analysis. Although *Markets and Hierarchy* contained minimal discussion of contract design and no index entry at all for 'law', entries for contracting and related terms take up a full page or more of the indexes of both *The Economic Institutions of Capitalism* (1985) and *The Mechanisms of Governance* (1996).

As in his writing on the theory of firm, Williamson distinguished a transaction-cost – or law, economics, and organization (LEO) – orientation from mainstream contracting theories, in this case, from those of 'orthodox economics' (mainly price and agency theories) and of law and economics (L&E) (1996: 385). Two features, in particular, characterized mainstream economics and L&E theories of contracting in Williamson's telling. The first was a conception of contracts as devices for aligning incentives, to discourage shirking and other forms of moral hazard where information asymmetries prevented the Arrow-Debreu ideal (Williamson, 1985b: chap. 1; 1988). The second was an implicit confidence in court enforcement. Despite differences in the functions ascribed to courts – economic contract theories, for the most part, gave little explicit attention to enforcement issues, the presumption being that courts (passively) enforce whatever terms contracting parties had chosen, subject only to verifiability constraints, while law and economics contemplated an active role for courts in devising default rules and in completing incomplete agreements (filling gaps), usually with terms the parties 'would have bargained for' themselves had they anticipated and incorporated the relevant contingency in the contract – economics and L&E shared the 'legal centralist' assumption that courts perform their assigned functions in 'an informed, sophisticated, and low-cost way' (Williamson, 1983: 520).

Transaction cost economics differed from the mainstream, first and most importantly, in rejecting the 'implicit assumption that the courts "work well"' (1983: 537): courts are neither the precise, mechanical enforcers of contracts of economic theory nor the supremely competent adjudicators and gap-fillers of law and economics. Discovering the parties' intentions and filling gaps in incomplete contracts, in particular, requires both 'detailed ex post knowledge of the particulars' and the expertise to perform the substantive calculations the transactors would themselves have had to make to determine efficient performance, neither of which courts are likely to possess (1985a: 201).

Rejection of the legal centralist confidence in court enforcement, in turn, redirects attention from *ex ante* incentive alignment to *ex post* governance and to the relative efficacy of court and private ordering. First, given the expense and limitations of courts, contracting parties will often prefer to effect adaptations and resolve disputes through negotiation rather than litigation, a preference evinced by

[4]The widespread use of the word 'contract' in economics to denote pretty much any agreement or transaction has produced a variety of unnecessary terminological complexities. A recent example is the organizational economics literature's adoption of the term 'relational contract' for self-enforcing agreements, requiring, in turn, resort to the retronym 'formal contract' to indicate court-enforced promises (see, e.g. Gibbons, 2021). Gil and Zanarone (2017, 2018) have argued for the use of 'informal' in place of 'relational' to describe 'contracts that are not enforced by courts' (2018: 739) and 'contract provisions [that] cannot be verified by a third party' (2017: 142) on the (accurate) grounds that 'relational contracting', as used by Williamson (1979) and legal scholars, referred to contract (legal) doctrines that recognize parties' ongoing relationships, as distinct from less flexible interpretive and enforcement rules. Although Gil and Zanarone's proposal is an improvement over the *status quo*, the interests of both clarity and adjective economization would be better served by reserving the term 'contract' strictly for legally enforceable agreements.

the relatively few contract disputes that go to trial. Second, imperfections of court ordering create opportunities for parties to engage in conduct aimed at evading performance, contriving cancellation, or otherwise forcing a renegotiation of the existing terms (Williamson, 1983: 526–527). Viewed in this light, contracts do not so much define the terms of trade as establish the procedures and alter the threat points from which parties compete over the division of transactional surpluses. As Macaulay observed, 'formal legal procedures are but a step in a longer process of negotiation. Filing a complaint and pre-trial procedure can be tactics in settlement bargaining' (1985: 468).

A consequence of viewing contracting through the lens of transaction cost reasoning is to shift 'the main analytical action [to] the ex post implementation stage of contract (where inefficiencies due to maladaptation arise)' (2002: 442): 'Transaction cost economics maintains that it is impossible to concentrate all of the relevant bargaining action in the ex ante contracting stage. Instead, *bargaining is pervasive* – on which account the institutions of private ordering and the study of contracting in its entirety take on critical economic significance' (1985: 29; emphasis in original). Although neither contract terms nor contract law are determinative of ultimate outcomes, 'the legal technicalities of contract law remain useful for purposes of ultimate appeal, thereby to delimit threat positions' (Williamson, 1996: 395). Understanding the law and the practical operation of the legal system, therefore, remains essential to understand contract design.

3. Implications for contract choice and design

Viewing contractual relations through a transaction cost lens alters one's view of almost every aspect of contracting. In some cases, the result amounts to a different interpretation, or possibly deeper appreciation, of conventional incentive provisions. In other cases, a transaction cost orientation yields competing explanations and testable hypotheses for previously analyzed contractual practices. Occasionally, the application of 'the lens of transaction cost reasoning' reveals a logic underlying contractual phenomena that have otherwise remained insusceptible to analysis.

Williamson described the implications, and identified some early applications, of a transaction cost perspective on contracting in the course of developing his broader approach to governance. A first step in such an analysis was to recognize that not all proposals to adapt pose the same hazards (1979: 251):

> What is needed…is some way for declaring admissible dimensions for adjustment such that flexibility is provided under terms in which both parties have confidence. This can be accomplished partly by (1) recognizing that the hazards of opportunism vary with the type of adaptation proposed and (2) restricting adjustments to those where the hazards are least.

His succeeding discussion of the relative properties of proposals to adjust prices *versus* quantities presaged later transaction cost treatments of price adjustment (e.g. Crocker and Masten, 1991; Goldberg, 1985; Goldberg and Erickson, 1987). Of the two, he argued, proposals to adjust price are likely to be the more problematic (1979: 251; see also Williamson and Wachter, 1978: 555):

> Quantity adjustments have much better incentive-compatibility properties than do price adjustments. For one thing, price adjustments have an unfortunate zero-sum quality, whereas proposals to increase, decrease, or delay delivery do not. Also, except as discussed below, price-adjustment proposals involve the risk that one's opposite is contriving to alter the terms within the bilateral monopoly trading gap to his advantage. By contrast, a presumption that exogenous events, rather than strategic purposes, are responsible for quantity adjustments is ordinarily warranted. Given the mixed nature of the exchange, a seller (or buyer) simply has little reason to doubt the representations of his opposite when a quantity change is proposed.

Consistent with Williamson's reasoning, contracts that give one party unilateral discretion to vary quantity – requirements and output contracts are examples – are common whereas contracts that

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similarly afford one party the authority to set price unilaterally are relatively rare, if not entirely non-existent (Crocker and Masten, 1991: 82; Joskow, 1985).

In choosing among price adjustment methods, strategic considerations again come into play. As rule, a tradeoff exists between the accuracy of an adjustment (its relation to relevant changes in the underlying transaction) and its susceptibility to opportunistic manipulation. Because price escalator clauses that relate prices to general economic conditions 'are not transaction-specific, imperfect adjustments often result when these escalators are applied to local conditions' (Williamson, 1979: 252). In that respect, adjustment provisions 'that are closely related to local circumstances' are preferable (*ibid*.): 'The issue is whether interim price adjustments can be devised for some subset of conditions such that the strategic hazards described above do not arise' (*ibid*.; see also, Williamson and Wachter, 1978: 559–561).

The existence of a tradeoff between substantive incentives and transaction costs featured in Williamson's discussion of price adjustment is a recurring theme in the transaction cost literature. A particularly engaging illustration is Robert Ellickson's (1989) study of 18th- and 19th-century whaling. Ellickson argued that rules that would have provided the strongest incentives for whalers to exert effort and cooperate during the pursuit and capture of whales tended to be vague and difficult to administer while clear, bright-line rules had lower administrative costs but provided weaker incentives and elicited inadequate cooperation. Ellickson's analysis of the historical record showed how whaling norms struck a balance between providing incentives to pursue whales (minimizing deadweight loss) and the transaction costs of administering the rules. The rules adopted, moreover, varied with the predominant species of whales and the associated harvesting technology in a way consistent with wealth maximization. In showing that whalers established rights in and resolved disputes over ownership of harvested whales without resort to the legal system, Ellickson's account also challenged the legal-centralist view that the state is the exclusive creator of property rights.

The willingness to sacrifice substantive incentives to economize on transaction costs was also a feature of Crocker and Reynolds' (1993) examination of pricing in U.S. Air Force jet engine procurement contracts and of Bajari and Tadelis' (2001) analysis of analysis construction contracts, in which, per Williamson's description (2002: 442), 'the basic trade-off [is] between high-powered incentives (where fixed-price enjoys the advantage) and ex post adaptation (where the advantage accrues to cost-plus)'.

The potential for contract evasion arising from adjudication imperfections also led Williamson to an early discernment of a role for contract prices (and other contractual devices) beyond their *ex ante* surplus-sharing and *ex post* incentive-alignment functions in the standard agency model. Specifically, given that the temptation to behave opportunistically depends on the stakes, arrangements that leave both parties comparably exposed – 'thereby to effect an equilibration of hazards' – reduces the prospect of post-agreement conflict (1985b: 34). Subsequent contracting research emphasizing the role of price in reducing the incidence of post-agreement conflict includes Goldberg (1985) and Goldberg and Erickson (1987); Masten (1988); Klein (1992, 1996); and Hart (2009). Empirical studies of natural gas contracts (Crocker and Masten, 1991), employment compensation (Oyer, 2004), truck driver compensation (Masten, 2009), and movie distribution (Barron *et al*., 2020), among others, have offered evidence consistent with the goal of economizing on *ex post* adaptation costs.

Even where standard incentive arguments adequately explain contract terms, Williamson's counsel that 'bargaining is pervasive' sometimes leads to alternative interpretations of contracting phenomena. For example, the conventional role of usage-based prices in variable-quantity contracts is to provide buyers the incentive to choose quantities that account (implicitly) for the seller's costs. A transaction cost orientation suggests an alternative understanding of the advantages of such pricing: inasmuch as (1) unrealized gains from trade due to maladaptation (suboptimal substantive choices) present opportunities for reopening negotiations, and (2) renegotiation is costly, contract terms that encourage choices closer to the likely negotiated outcome will tend to reduce the expected cost of negotiated adaptations.

A concrete illustration is the pricing of 19th-century public utility services. Unlike other privately supplied utility services such as electricity and (manufactured) gas that used (often sophisticated)

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quantity-contingent pricing schedules, private water companies rarely charged for water consumption, depending instead on fixed monthly connection or access fees and what amounted to lump-sum transfers from municipalities to cover their costs. The negligible marginal cost of delivered water, the cost of metering, the feasibility of resale, and the health and safety benefits of universal access all disfavored charging for water use. Reliance on fixed charges, however, arguably suffered adaptation disadvantages that contributed to the eventual municipalization of waterworks in the USA over the course of the 19th century.[5] First, inframarginal (service-invariant) payments forfeit the incentives for unilateral adjustments that service-based charges provide: a private utility whose receipts vary automatically with service levels has an incentive to undertake system improvements, extensions, and repairs that contribute to net revenue without the need to reopen the agreement. Where service adjustments are not priced or are under-priced, by contrast, every proposal for improvement or extension of the system becomes an occasion for potentially contentious and costly negotiation.

The incentive-alignment and transaction cost-economizing interpretations of the role of per-unit prices, although conceptually different, are largely compatible. A transaction cost orientation identifies considerations related to the use of fixed (lump-sum) charges not evident in conventional incentive approaches, however. Although non-contingent payments serve only to distribute expected surpluses (to satisfy the participation constraint) in the standard agency model, transaction cost economics perceives inframarginal payments as relatively attractive targets for rent seeking. Because service-contingent payments affect incentives both to consume and to supply services, attempts to appropriate rents that move such payments away from their efficient level reduce the surplus available to appropriate and, therefore, tend to be self-limiting. (Conversely, proposals to adjust inefficiently high or low service-based prices have a positive sum nature and are thus conducive to mutually advantageous modifications.) Changes in inframarginal payments, by contrast, are (in the short term) purely redistributional: because inframarginal payments do not distort substantive incentives to consume or produce, expropriations effected through modifications of inframarginal transfers leave quasi-rents (largely) intact. Using again the example of public utility pricing, a city that forced a significant reduction in service rates from a gas, electricity, or telephone company would likely suffer both near-term service degradations (given their nontrivial marginal costs of production) and company reluctance to invest in service expansion over the longer term; a city that reneged on promised lump-sum subsidies to water companies would likely experience only the latter.

4. Court *versus* private ordering

In his research on thetheory of the firm, Williamson associated the distinctive properties of integration with the concept of 'forbearance law', under which courts will refuse to adjudicate disputes within an organization that they would entertain between independent entities (1991: 274). Integrating transactions thus becomes, in effect, a way of avoiding or limiting court ordering. A central theme of Williamson's theory of contracting is that parties' choice of contract terms (or 'contract laws') reflects similar concern with the relative merits of court and private ordering.

'Relational' terms

Contract ambiguities or omissions are conventionally regarded as failures or errors. But, contract imprecision is, in fact, often intentional. Transactors deliberately adopt terms such as 'good faith', 'best efforts', 'gross inequity', or 'substantial performance' to describe their obligations under contractual agreements. A stark example is the 2004 Chicago Skyway Concession and Lease Agreement that transferred operations and management of a 7.8 mile section of a highway on Chicago's South Side to a private company under a 99-year lease. The more 636-page agreement contained the following

[5]In emulation of Williamson and Wachter (1978) and Williamson (1979), the discussion of utility pricing that follows redeploys text from Masten (2011) for a different audience.

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terms: 'satisfactory' 10 times; 'timely' 11; 'good faith' 12; 'diligent' 17; 'proper' 43; 'reasonable' 91; and 'reasonably' or 'unreasonably' 125 times. Although a striking illustration, the use of such terms is by no means unusual.[6]

Insights into why and when parties would choose to describe their obligations in such indefinite language may be gained using a strategy that Williamson often deployed in other contexts – one of shifting the usual starting point of an analysis – to highlight the comparative efficiency properties of an organizational arrangement can be useful. Williamson's best-known application of that strategy was to illuminate the limits of firms in Chapter 6 of The Economic Institutions of Capitalism (1985b). There, instead of beginning with markets and asking why transactors might want to integrate, Williamson began with an integrated firm and asked 'Why can't a large firm do everything that a collection of small firms can do and more?' by replicating the incentives of independent entities and intervening selectively where doing so would yield net benefits (1985b: 131). Posing the question that way led to his identification of 'forbearance' law as the source of the firm's distinctive properties.

Williamson's application of the strategy can also be seen in his analysis of franchisors' choice of contract terms. Rather than formulating the issue as a principal-agent problem with the franchisor as principal and franchisees as agents, Williamson suggested a scenario in which a number of independent suppliers initially purchase outright a non-exclusive right to produce a distinctive brand-name product or service. On discovering the potential for free riding on quality, such suppliers would find it advantageous to enter an agreement that (1) required each other to post a bond or other 'hostage' in the form of specialized assets as safeguard against quality debasement and (2) established an agency for the monitoring and punishment of free riders. 'The franchisees, under the revised scenario, thus create an agent to police quality or otherwise devise penalties that deter quality deterioration' (1985b: 181–182). Williamson concluded that, if franchise restrictions were not 'imposed' by franchisors, franchisees would have to find some way of inflicting them upon themselves. In a similar manner, rather viewing corporate boards as instruments of shareholders, Williamson proposed beginning the analysis with an entrepreneur- or worker-controlled firm and ask, on what terms could such a firm procure financial capital at lowest cost? Observing that, in comparison with entrepreneurs and workers who 'are often able to craft a sensitively tuned bilateral governance structure at the contractual interface' between themselves and the firm, suppliers of equity are far more vulnerable, given their relative geographic dispersion, to expropriation of their investments (1985b: 323). An employee- or management-owned firm that offered potential investors a safeguard against this hazard in the form of a body that could oversee the use of capital – in essence, a board of directors – might find itself able to secure financing at more attractive rates. In each case, Williamson's reversal of the usual orientation demonstrated that the adoption of specialized governance structures 'can be and often is an efficient system solution, hence is independent of who originates the proposal' (*ibid*.: 181).[7]

An analogous strategy applied to contracting stands to yield comparable insights. As described above, the 'orthodox' approach to contracting posits (unrealistic) complete contingent claims contracts as the ideal and considers what (possibly complex) contract design would most closely approach that ideal or, failing that, asks how courts could supplement the parties' agreement to facilitate that goal. An alternative orientation is to pursue the question of contract form f beginning, instead, with the (equally unrealistic) legal-centralist assumption that courts are capable of accurately and costlessly discovering and enforcing transactors' intentions. In such a world, transactors would presumably have no reason to enter anything more than the simplest conceivable contract – indicating perhaps only a price and quantity or even only a vague intention to transact at some indefinite date in the future – confident in the

[6]Important contract terms that leave performance obligations indeterminate include price renegotiation and 'gross inequity' provisions in long-term coal contracts (Joskow, 1985), termination-at-will and best-efforts clauses in franchise agreements (Hadfield, 1990), substantial performance requirements in construction contracts (Goetz and Scott, 1981), 'market out' provisions in natural gas contracts (Crocker and Masten, 1991), and various other 'open term' agreements (e.g. Gergen, 1992).

[7]An earlier example of this strategy appeared in Williamson (1976) in the context of franchise bidding as an alternative to traditional regulation of public utilities.

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knowledge that courts will fill in the details and assure appropriate adaptations thereafter. Put another way, the only reason for transactors to incur the trouble and expense of drafting definite performance obligations would be to avoid or reduce the cost or inaccuracy of court ordering.

Viewed from this perspective, contract design – whether to rely on indefinite, 'relational' obligations or to specify definite obligations and, if so, how many and what type of details and contingencies to include – can be seen as a decision about the extent to which the parties wish to effect adaptions through court ordering *versus* private ordering. Terms like 'best efforts', 'gross inequity', or 'substantial performance' are, in effect, invitations for court ordering. By contrast, contracts that specify precise performance obligations, define sanctions (such as liquidated damages or termination), and allocate discretion to invoke those sanctions unilaterally, can be seen as efforts to shift the locus of decision making and adjustment away from the courts to the transactors – to the extent, at least, that courts defer to explicit contract terms.

Nominal terms, real intentions, and contract enforcement

That 'courts defer to explicit contract terms' is an important proviso. A tension arises when transactors' preference for private ordering conflicts with contract doctrines (and law and economics analyses) that encourage courts to complete incomplete agreements. Given the cost and imperfections of court ordering, transactors might reasonably prefer contract provisions that leave gains from trade unrealized, or that intend that sufficiently worthwhile adjustments be accomplished through renegotiation (of extant terms) or other forms of self-help, over contract terms that specify the efficient course of action but increase the costs or likelihood of litigation. In such cases, judicial insistence on completing simple contracts, perceived as incomplete, may frustrate rather than foster the parties' intentions. Ultimately, the ability of contracting parties to achieve process objectives – to reduce court ordering through the use of more precise language, for example – depends on the extent to which courts are willing to defer to the written terms of the parties' agreement. As Schwartz and Scott (2010) observe, parties often find it difficult to contract out of 'contextualist' interpretive principles – as reflected, in the USA, in the Uniform Commercial Code and the Restatement (Second) of Contracts – that encourage courts to examine the circumstances surrounding a contract and its performance to discover the parties' true intentions.

This tension between transactors' desire to limit court ordering and the propensity of courts to supplement written agreements perceived to be incomplete or otherwise deficient has potentially fundamental implications for contract design and interpretation. As conventionally conceived, contracts are devices for communicating substantive performance objectives. In the words of Goetz and Scott (1985: 265), contracting parties seek first 'to negotiate a subjective understanding about the combination of underlying substantive rights that form the basis for mutually beneficial trade. What remains is an instrumental problem, that of formulating contractual terms that mirror the desired exchange'. Where the parties' aims include the avoidance of court ordering, however, the presumption that contract terms define the substantive outcomes the transactors wish to see take place may no longer be justified. Indeed, in some circumstances, a contract's express terms may have only an indirect, and possibly even a contradictory, relation to the parties' substantive aims. The following pair of case studies illustrates the potential for such a divergence.

United Shoe Machinery Corp. leasing

My study (with Edward Snyder) of United Shoe Machinery Corp.'s machinery leases (Masten and Snyder, 1993) encountered a peculiar discrepancy between the lease's terms and the company's performance. United Shoe Machinery Corp., the dominant manufacturer of shoe-manufacturing equipment throughout the first half of the 20th century, offered its most important shoe-manufacturing machinery exclusively by lease. Most of the text of United's standard 10-year lease concerned pricing arrangements. An exception, however, was the allocation of responsibility for the cost of repairs and replacement parts under the leases. Specifically, United's leases unequivocally assigned the responsibility for repairs to the lessee. The relevant term read as follows:

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> The lessee shall at all times and at his own expense keep the leased machinery in good and efficient working order and condition…. In case at any time any of the leased machinery shall not, in the opinion of the United [Shoe Machinery] Corporation, be in good and efficient working order and condition, the United Corporation without prejudice to any other of its right or remedies may give written notice to the lessee to put such machinery in good and efficient working order and condition and to replace all broken or missing parts; and in case the lessee does not within fifteen (15) days from the date of such notice comply with the requirements thereof, as herein set forth, the United Corporation may cause such machinery to be put in such good and efficient working order and condition, and may supply such broken or missing parts, and the lessee shall forthwith pay to the United Corporation the expense of making such repairs and the costs at the regular prices established by the United Corporation therefor of all parts so supplied.

Despite this seemingly unambiguous assignment, however, United consistently assumed the burden and expense of repairing its leased machines. In fact, United was so uniform in this practice that United's 'tying' of machine sales and repair services was part of the government's complaint, and the court's decree specifically required that United segregate its charges for machines from its charges for repair service.

The evident deviation between substantive intentions and United's lease terms is hard to ascribe to an oversight on United's part. The repair of shoe machinery was not an incidental matter. United's machinery services represented about 20% of United's total costs, higher even than manufacturing costs (at 17.5%, the remainder consisting of research, machinery distribution, and overhead costs). The pricing and responsibility for repairs was clearly a factor to which United gave considerable thought.

The discrepancy between the *de jure* and *de facto* responsibility for repairs under United leases is consistent, however, with a desire by United and its lessees to avoid adjudication costs. United's principal enforcement mechanism for lessee misbehavior was termination.[8] As long as a machine was not abused or its meters (on which usage-charges were based) tampered with, United had no incentive to terminate a lease and, moreover, had substantial incentives, given the contingent nature of payments under leasing, to maintain and repair its machinery. Formally assigning the obligation to maintain machines to United would have done nothing to augment those incentives and could have provided the lessee with an avenue to contrive cancellation of the lease by claiming unsatisfactory performance on the part of United. Given the high incidence of breakdowns on even the highest-quality and best-maintained machines, an opportunistic lessee wishing to return a machine to avoid the implicit charges for information would likely have been able to construct a credible claim of dissatisfaction and thereby evade performance. Legal assignment of the material and financial burden of caring for machines to the lessee, by contrast, reinforced United's legal authority to punish customer tampering and abuse by repossessing machines. Lessees were, in effect, always in gross violation of the lease's maintenance requirements and would thus have found it difficult to challenge a termination by United. The observed discrepancy between the terms and performance of United's leases appears, at least, to be consistent with a goal of supporting desired performance while avoiding the prospect of costly adjudication.

IBM's personal-computer dealer agreements[9]

A more detailed and arguably more compelling illustration of the use of substantive terms for process purposes comes from a study of IBM's personal-computer dealer agreements. During the 1980s, IBM

[8]The lease read:

> Upon the termination in any manner of the lease hereby granted in respect to any machine or machines hereby leased the United Corporation by its agents is hereby authorized to enter upon any premises where such machinery or any thereof may be and to take possession of and to remove such machine or machines.

[9]The information in this section, unless otherwise noted, is based on Banerji (1990).

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sold personal computers through both direct (internal) sales offices and through independent dealers. The independent dealers ranged from general retailers such as Sears and large, specialized computer retailers such as Computerland and Entre Computers to a set of smaller, lesser-known, independent retail outfits. IBM used these independent dealers primarily to reach smaller customers who often possessed less familiarity with computers and were, as a result, in potentially greater need of both pre- and post-sale service. IBM's 1-year, renewable dealer agreements authorized independent retailers to purchase and resell IBM equipment and to use the IBM trademark and defined dealers' rights and responsibilities. Among its provisions, the 15-page agreements specified (1) ordering and scheduling procedures; (2) trademark usage conditions and restrictions; and (3) pre- and post-sale service requirements. The latter included the maintenance of (1) trained sales and service staff, facilities, and floor space devoted to display and repairs; (2) an adequate inventory to supply end users with machines 'off the shelf'; and (3) tools, test equipment, and replacement parts for repairs (Banerji: 139–140). Finally, the contract expressly limited remedies for violations of the agreement to self-help, specifically, 'In the event of the failure of either party to fulfill any of its obligations hereunder, the exclusive remedy of the other party shall be to request that such obligation be fulfilled and, if that does not occur promptly thereafter, to terminate this Agreement…'.[10]

Of particular interest here, however, is the agreement's prohibition of the resale of IBM computers to unauthorized or 'gray-market' dealers. Specifically, the contracts proscribed sales of IBM computers that conflicted with or violated the terms and conditions of IBM warranty provisions, which, in turn, were voided by sales to or by unauthorized resellers (IBM Personal Computer Retail Agreement: 1; Banerji, 1990: 195). The agreements also prohibited authorized dealers from 'appoint[ing] additional authorized dealers, warranty service centers or distributors of IBM computers' (*ibid.*: 193–208).

Despite these contractual prohibitions, retailer reselling of computers to unauthorized dealers – known as 'bootlegging' – was quite common. An investigation undertaken by IBM in which an IBM agent posed as a gray-market dealer discovered 'almost universal interest' in gray-market sales among authorized dealers (Banerji: 158). The investigation revealed, moreover, that approximately 30% of IBM's 2,200 authorized dealers and all of its major accounts – including Computerland, Sears, and Entre Computer – knowingly engaged in gray-market sales, about half 'on a regular basis' (*ibid.*: 158–159). Overall, IBM estimated that gray-market sales accounted for approximately 5% of its total shipments (*ibid.*: 158).

Neither the existence of restrictions on bootlegging nor cheating on those restrictions is remarkable in itself. Restrictions on gray-market sales may have been desirable for a variety of reasons. IBM may have wanted to prevent small dealers from taking advantage of quantity discounts contained in IBM's pricing schedule. Alternatively, IBM may have wished to restrict bootlegging as a means to prevent dealer free riding from debasing its reputation for service. Given that IBM used independent dealers primarily to reach small-scale users who may have had little familiarity with computers, IBM had an interest in assuring that dealers provide customers with a range of pre- and post-sale service, including product demonstrations, software and hardware configuration, advice on customer needs and use, and the performance of 'immediate' warranty service (Banerji: 138). For their part, dealer cheating on these provisions is consistent with simple moral hazard in the presence of costly detection and verification of contract violations.

What is remarkable is the fact that, despite devoting substantial resources to detecting and documenting bootlegging by its dealers, IBM terminated only about 3% of *documented* violators (Banerji: 153–154).[11] Even though IBM was aware of and possessed documentary evidence verifying specific instances of contract violations, IBM failed to invoke its only contractual sanction in the vast majority

[10]IBM Personal Computer Retail Agreement: 13; reproduced in Banerji (1990: 206). Exceptions existed only for actions to collect 'monies due' and to protect IBM's 'copyrights, trademarks or trade names'.

[11]Initially, IBM would be alerted to gray market sales by checking source-of-purchase information on consumer response cards that established warranty protection, through dealer complaints about other dealers' reselling activity, or by tracing serial numbers from equipment obtained through clandestine 'corporate security' purchases (Banerji: 146–147). When prohibited sales were detected, IBM would then initiate an investigation and audit of the noncompliant dealer. Through

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of *verified* cases. A clear divergence thus existed between the terms of the contract and performance, both by the dealers, who violated the terms, and by IBM, which did not sanction violators. In the case at hand, (1) the contract contained an unequivocal prohibition of a specific behavior, (2) the prohibited behavior was widespread, and (3) the principal contractor devoted significant resources to investigating and documenting the prohibited behavior but (4) rarely punished violators.

Reconciling this record with conventional views of the role of contracts is challenging, at best. It appears that, although high levels of gray-market sales were contrary to the interests of IBM and its dealers, some positive level of bootlegging activity may have been efficient. Banerji (1990) suggests that gray-market sales may have provided IBM an indirect means of price discriminating by allowing discounted sales to low marginal value customers. Alternatively, IBM may have chosen to tolerate some reselling because termination involved costs (either direct or in terms of forgone future gains from trade) that exceeded the benefits of disciplining violations. But, perhaps most significant is the fact that, according to IBM's records, among the largest bootleggers were IBM's own internal sales divisions, over which IBM might be presumed to have direct control.

But, if positive levels of bootlegging were in fact desirable, why would IBM's dealer agreements categorically proscribe bootlegging? Again, it is unlikely that IBM's terms represented a failure to anticipate the value of bootlegging. There is no indication that IBM made any efforts to correct this deficiency once revealed by experience. Reselling was a common practice and widely known in the industry, and IBM maintained its categorical bootlegging prohibition even after its policy of selective enforcement was well established. Dealers, moreover, appear to have understood that IBM did not intend to enforce the prohibition, continuing to engage in gray-market sales even while under investigation by IBM.

It is possible, of course, that the optimal level of gray-market sales varied over time or across markets or dealers in a way that made *ex ante* specification of a contingent level of allowable resales excessively costly. According to Banerji, IBM's decision to terminate (as infrequently as that occurred) involved a variety of often qualitative considerations including the extent of the violation, the size of the violator, and 'other factors' (pp. 150, 155–157). The decision to terminate was thus likely to have been conditional on both the extent of the violation and the dealer's compliance with other contractual requirements. The difficulty in specifying contingent termination conditions does not explain why IBM would specify a permissible level of resales at zero, however, given that IBM anticipated allowing some reselling. Furthermore, given that IBM enforced the contracts through termination rather than court ordering, what harm would there have been in adopting terms that more accurately, if imprecisely, described IBM's policy and dealers' apparent understanding of what would be tolerated? The contract could have, for instance, acknowledged that some level of reselling was permitted and even desirable, reserving the right of IBM to limit gray-market sales or requiring dealers to obtain IBM authorization for such transactions. Such a provision would have at least aligned more closely with IBM's intentions and actual practices.

IBM's categorical prohibition of reselling makes sense, however, if its purpose was to forestall court ordering. A contract that acknowledged the basing of discretionary termination decisions on a balancing of costs and benefits would invite courts to engage claims of bad faith termination, likely leading to inquiries into IBM's previous practices regarding reselling (course of dealing and performance) as well as the circumstances of the current termination. A categorical prohibition of reselling, in contrast, if respected by the court, removed one, potentially expensive layer of dispute: IBM would need only show that reselling had occurred, not to establish that the level of reselling was unreasonable or excessive. A blanket prohibition arguably provided firmer support for IBM's right to terminate by removing (or weakening) one potential grounds for challenging a termination.

In addition to shedding light on otherwise enigmatic contracting practices, a process orientation – in which the main dimension along which contracts vary is the extent to which parties desire to realize

examination of a store's invoices (which the dealer agreement required the dealer to keep), IBM could determine the exact scope of a dealer's violations.

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contract adjustments through court ordering *versus* private ordering – highlights the interaction between judicial enforcement policies and contract design. The ability of contracting parties to achieve process objectives – to reduce court ordering through the use of more precise language, for example – depends crucially on the extent to which courts are willing to defer to written terms. Generally, the realization of transactors' process goals will be enhanced if courts adopt a 'passive' enforcement policy that enforces the contract 'as written'. Understanding why and when more 'active' court ordering is warranted remains an important agenda item. Ultimately, as in all matters of governance, '[w]hether [courts] work well or poorly…requires a comparative institutional assessment' (Williamson, 1983: 537).

5. Conclusion

One consequence of the successes – both theoretical and empirical – of the transaction cost framework in explaining firm boundaries has been a tendency to associate transaction cost economics exclusively with the theory of the firm and, in particular, with the prediction that internal organization is more likely where operations can be more efficiently carried out using relationship-specific investments. As important as those accomplishments are, the emphasis on integration decisions and relationship-specific investments forestalled, in some quarters, an appreciation of some of the more subtle implications and broader applications of viewing governance through the transaction cost lens. An indication of that mis-appreciation can be found in criticisms that fault transaction cost economics for failing to analyze, sufficiently or at all, one or another factor: capabilities, culture, and social norms, the determinants of and variations in bounded rationality, and so on. At times, such criticisms reflect no more than too narrow a familiarity with the transaction cost literature. Just because a topic did not make it into Williamson's oeuvre, as extensive as it is, does not mean that a topic has been ignored by other transaction cost-oriented scholars. Indeed, the explosion of research extending and applying transaction cost reasoning makes it increasingly difficult to find topics that have *not* been analyzed in transaction cost terms.

At other times, however, such criticisms denote an incomplete understanding of the core logic of viewing governance through a transaction cost lens. It is one thing to say that transaction cost economics *cannot* incorporate or contribute understanding to something, and another to say that it *has not* done so. The former, of which instances undoubtedly exist, is a valid criticism (though not one that necessarily troubles open-minded scholars). The latter, if true, is no more than a suggested item to put on the agenda for future research.[12]

As I hope the preceding has suggested, contracting, contract law, and the relation between them is an area deserving of further research. To be sure, the analysis of contracting practices and of judicial decision-making, by both economists and legal scholars, has advanced considerably in recent years. A residual reluctance to incorporate positive (but not prohibitive) costs of *ex post* bargaining and adjudication into contracting models nevertheless continues to inhibit progress on what Williamson saw as the central tradeoff.

Transaction cost economics must now be regarded part of the economics canon – even of Williamson's much derided 'orthodoxy'. Yet, full assimilation of transaction cost principles is hardly the norm. Viewing governance through the Williamson's lens requires some effort and a period of adjustment. Once implanted, however, it becomes difficult to view organization any other way.

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[12]For those interested in a deeply insightful (and erudite) presentation of transaction reasoning, I commend the introductory chapter of Dean Williamson's recent book (2019).

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