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AN EMPIRICAL EXAMINATION OF BUSINESS OUTSOURCING TRANSACTIONS

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INTRODUCTION

BUSINESS outsourcing partnerships have become an increasingly common strategy for firms seeking to cut costs, upend their value chains, or focus on narrower slivers of competence. These deals are widely reported by the popular press, especially when they displace local jobs, and outsourcing spans nearly every sector of the economy. Moreover, according to some studies, the current transaction volume may represent just the tip of the iceberg. One report, for instance, estimates that nearly 160 million jobs in the service economy, roughly eleven percent of global employment in this sector, could theoretically be performed offshore.[1]

[1] See Diana Farrell et al., McKinsey Global Inst., The Emerging Global Labor Market: Part I—The Demand for Offshore Talent in Services 34 (2005), available at http://www.mckinsey.com/mgi/reports/pdfs/emerginggloballabormarket/part1/MGI_demand_fullreport.pdf. McKinsey estimates this figure by examining business activity in eight industry sectors and extrapolating these results to the entire services economy. Id. at 330. The report does not suggest, however, that the actual number of jobs outsourced will come anywhere close to 160 million, citing a wide variety of industrial, organizational, regulatory, and social factors that will significantly limit this number. Id. at 43–52. Furthermore, some of the change will involve captive offshoring—not outsourced offshoring—meaning that assets and employees remain within the corporate fold.

Yet despite the strategic and economic importance of these partnerships, very little is known about their precise contractual structure. Many firms are notoriously reluctant to even acknowledge an outsourcing move—fearing competitor imitation or a political backlash at home—let alone disclose additional details on how these deals actually work. Some outsourcers even force vendors to sign confidentiality agreements promising to keep their clients' identities shrouded in secrecy. This poses a real challenge for scholars seeking to understand the detailed contracting strategies used by these parties to set incentives, monitor performance, divide the gains from trade, or exit a failed relationship. How do firms select a legal framework to govern these complex relationships? What terms feature repeatedly in outsourcing partnerships? And do these terms vary significantly for different types of projects?

This Article explores these questions by conducting a micro-analytical examination of sixty onshore and offshore business outsourcing contracts. There are two primary goals. First, this work offers a positive study of key governance features in outsourcing contracts, including some discussion of how these agreements compare with other forms of organizational contracting such as venture capital financings or joint research alliances. The high-level takeaway from this analysis is that there is no one-size-fits-all mold for stamping out these deals; firms employ great diversity in their contracting. The more nuanced claim is that this apparent cacophony can be synthesized into some common contracting patterns.

This discovery leads directly into the second research question: why do specific relationships take on their observed forms? I delve into this problem by using the micro-analytical data set to assess links between transactional context and governance structure. This work suggests that firms will use a contract with more hierarchical features when the outsourcing context presents acute levels of agency and hold-up risk. A "vanilla" call center deal, for example, may receive very different contractual treatment than a project to outsource drug discovery or the entire human resources ("HR") department. Likewise, there seem to be meaningful connections between liberal exit rights and a relaxed form of operational governance. In other words, the ability to stage commitment to a project may lower agency costs and substitute for hierarchical control rights or incentive-compatible financial terms. Yet there are also

some surprises in the data. For example, both cross-border deals and projects involving multiple business functions do not appear more likely to embrace hierarchical governance models.

More generally, this Article should be understood as offering modest support for transaction cost theories of economic organization. The traditional challenge in this area, of course, is to explain why firms produce some economic inputs internally while securing other goods via external contract. At a high level, transaction cost theorists refer to this as the "make or buy" decision and argue that considerations related to agency costs, the hold-up problem, and other factors will influence a firm's strategy.[2] Yet scholars are also starting to recognize that there is a range of organizational options between the polar extremes of "make" and "buy."[3] Firms might craft joint ventures, franchise agreements, or other nuanced alliances that compromise among the various tradeoffs underlying internal and external production.[4] These hybrid arrangements can be tricky to analyze, however, because it is difficult to articulate a general theory of what it means to have a contract that is more "market-like" or more "firm-like." This suggests that it may be

[2] See Paul L. Joskow, Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence, 4 J.L. Econ. & Org. 95, 95–102 (1988); Peter G. Klein, The Make-or-Buy Decision: Lessons from Empirical Studies, *in* Handbook of New Institutional Economics 435, 436–38 (Claude Ménard & Mary M. Shirley eds., 2005); Jeffery T. Macher & Barak D. Richman, Transaction Cost Economics: An Assessment of Empirical Research in the Social Sciences, 10 Bus. & Pol. 1, 31–38 (2008) (discussing work in the social sciences beyond the fields of economics and management); Howard A. Shelanski & Peter G. Klein, Empirical Research in Transaction Cost Economics: A Review and Assessment, 11 J.L. Econ. & Org. 335 (1995).

[3] Shelanski & Klein, supra note 2, at 337. The typical approach is to acknowledge the possibility of intermediate hybrid structures (or multi-sourcing strategies where a firm both makes and buys a given input), but then to simplify the analysis into a dichotomous choice between firm and market production. See, e.g., Anne Parmigiani, Why Do Firms Both Make and Buy?: An Investigation of Concurrent Sourcing, 28 Strategic Mgmt. J. 285, 287 (2007). For example, in a classic empirical study, Professors Kirk Monteverde and David Teece define a firm as "making" when it performs eighty percent or more of an activity and as "buying" when the firm performs less than this amount. Kirk Monteverde & David J. Teece, Supplier Switching Costs and Vertical Integration in the Automobile Industry, 13 Bell J. Econ. 206, 207 (1982).

[4] See, e.g., George S. Geis, The Space Between Markets and Hierarchies, 95 Va. L. Rev. 99, 121–26 (2009) (offering a theoretical justification for hybrid organizational contracting); Joanne E. Oxley, Appropriability Hazards and Governance in Strategic Alliances: A Transaction Cost Approach, 13 J.L. Econ. & Org. 387, 389–92 (1997) (analyzing hybrid technology transfer alliances from a transaction cost economics ("TCE") perspective).

fruitful to pursue micro-level analyses of specific classes of hybrid contracts—and this Article does exactly that for the rapidly growing area of business outsourcing.

The Article is organized as follows. Part I introduces the theoretical framework for the project and summarizes the literature on hybrid organizational contracting and business outsourcing transactions. Part II describes the data and project methodology. Part III reports on the positive analysis of key contractual features in the business outsourcing data set. Part IV turns to the empirical link between business context and contractual form by exploring several hypotheses related to the governance of outsourcing. A brief conclusion summarizes the Article.

I. PRIOR LITERATURE

A. Transaction Cost Economics

Every firm faces a fundamental choice about the best way to run its business. Should it own and produce the necessary assets and inputs under the corporation's legal capacity? Or should it strike external contracts with vendors to secure these goods and services?

Transaction cost economists, dating back to Professor Ronald Coase,[5] have argued that firms will wish to make some inputs internally, even when production is more expensive, in order to drive down the transaction costs of contracting.[6] As the story goes, commercial exchange begets frictions, and internal ownership can conceivably check the hassles of negotiation, coordination, and ex post

[5] R.H. Coase, The Nature of the Firm, 4 Economica 386 (1937).

[6] For a helpful review of scholarship in this area through 1999, see Nicolai J. Foss et al., The Theory of the Firm, *in* 3 Encyclopedia of Law and Economics 631 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000). Oliver Williamson has significantly expanded upon Coase's initial insights by showing how a proper conception of transaction costs should include both the direct costs of managing relationships and the opportunity costs of suboptimal governance decisions. See Oliver E. Williamson, Markets and Hierarchies: Analysis and Antitrust Implications 20–40 (1975) [hereinafter Williamson, Markets and Hierarchies]; Oliver E. Williamson, The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting 131–62 (1985) [hereinafter Williamson, Economic Institutions]; Oliver E. Williamson, The Mechanisms of Governance 171–94 (1996) [hereinafter Williamson, Mechanisms]; see also Sanford J. Grossman & Oliver D. Hart, The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration, 94 J. Pol. Econ. 691 (1986); Oliver Hart & John Moore, Property Rights and the Nature of the Firm, 98 J. Pol. Econ. 1119 (1990) (extending this work into a "property rights" theory of economic organization).

hold-up.[7] There are, to be sure, countervailing drawbacks from internal ownership including higher production costs,[8] agency costs,[9] and capital structure inefficiencies.[10] The ideal location of a firm's borders, then, is thought to arise through compromise among these competing effects.

Over the past few decades, hundreds of empirical studies (both quantitative and qualitative) have investigated whether transaction cost theories actually seem to explain how production is organized.[11] Thus, a transaction that is especially sensitive to hold-up risk—perhaps because it involves intense combinations of relation-specific assets or requires nonstop coordination with other units—is expected to be "made" within a firm.[12] Conversely, scholars predict that a transaction lacking these features will be "bought" out-

[7] The general idea here is that some inputs will have a high value for one firm, typically because the asset will be combined with other specialized inputs, while the same asset is worth less to everyone else. Suppliers may hold up these high value users—for example, by demanding more money after investments are sunk—in order to expropriate the value from these relation specific assets. Recognizing this risk, firms may write more detailed contracts (to guard against ex post appropriation), forgo fruitful investments (by replacing uniquely tailored assets with more general ones), or produce specialized inputs internally (to dispel the hold-up problem). See Williamson, Economic Institutions, supra note 6, at 163–205.

[8] Production costs will theoretically be greater with internal ownership because the activity is shielded from direct market pressure. See Coase, supra note 5, at 388–90. The exception comes when the firm is more efficient at a given activity than all potential suppliers.

[9] The agency cost problem is thought to become more acute because complicated corporations harbor plenty of dark corners, and managers have incentives to use this information asymmetry to take advantage of equity owners. See Michael C. Jensen & William H. Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. Fin. Econ. 305, 323–26 (1976). See generally Eugene F. Fama, Agency Problems and the Theory of the Firm, 88 J. Pol. Econ. 288, 295–97 (1980) (discussing the extent to which market forces can discipline managers).

[10] See Edward M. Iacobucci & George G. Triantis, Economic and Legal Boundaries of Firms, 93 Va. L. Rev. 515, 544 (2007) (describing how capital structure inefficiencies can arise when heterogeneous assets are funded with a firm-wide capital structure).

[11] These studies embrace diverse empirical methodologies, ranging from rigorous econometric exercises to anecdotal case interviews. See Macher & Richman, supra note 2, at 1–2 (cataloging approximately 900 articles on transaction cost economics across a variety of disciplines); Shelanski & Klein, supra note 2, at 338–39 (classifying research methodologies into qualitative case studies, quantitative case studies, and cross-sectional econometric analyses).

[12] See Macher & Richman, supra note 2, at 2–4.

side of the firm.[13] In other words, organizational form can be seen as a dependent variable, and critical transactional properties such as asset specificity, uncertainty, complexity, and interaction frequency can be modeled as independent variables.[14] Econometric analysis is then conducted to check whether the latter seems to influence the former. The results are subject to multiple interpretations, but much of the evidence does seem to suggest that, as predicted, transaction cost economics plays a significant role in organizational form.[15]

Importantly, however, many of these empirical studies adopt a simple binary variable ("make" or "buy") in their analysis. This is obviously an oversimplification. Firms do not just shove economic activity to one side of the line or the other; they have a wide range of hybrid structures through which to conduct their affairs. These include arrangements like joint ventures, business alliances, minority equity investments, and franchise agreements. More recent work has started to extend the basic methodology of transaction cost economics into these nuanced hybrid contracts.

B. Hybrid Organizational Entities

Between the polar extremes of spot market transactions and captive corporate subsidiaries lies a vast expanse of organizational contracting. A firm might write a 300-page franchise agreement, for example, to maintain painstaking control over the exact steps that external franchisees must take to buy cheese and slice pizza.[16] Or two firms of roughly equal clout may accede to a joint venture, perhaps operated by a neutral third party, to pool intellectual

[13] See id.

[14] Shelanski & Klein, supra note 2, at 338. In addition, empirical researchers will typically include variables in their models to control for effects related to industry, firm size, and other descriptive features.

[15] See, e.g., id. at 336 (reviewing the research and concluding that "a remarkable amount of the empirical work . . . is consistent with TCE predictions—much more so, perhaps, than is the case with most of industrial organization"); Oliver E. Williamson, The New Institutional Economics: Taking Stock, Looking Ahead, 38 J. Econ. Literature 595, 607 (2000) ("Those who have done this modest, slow, molecular, definitive work deserve enormous credit.").

[16] See, e.g., Francine Lafontaine, Agency Theory and Franchising: Some Empirical Results, 23 RAND J. Econ. 263, 264–65 (1992).

property ("IP") resources.[17] There are an endless set of possibilities for parsing and pooling the primary governance features of markets and hierarchies.[18]

From a transaction cost economics point of view, the basic strategy for examining these hybrid organizational forms is similar to—though clearly more complicated than—that of the binary "make or buy" studies. Intermediate transactional forms are divided into different relationship tranches, ranging from closely integrated ventures to looser, long term contracts or informal alliances. Empiricists can then examine, as before, the key variables underlying these transactions to test whether hybrid form follows function.

Professor Joanne Oxley's 1997 study of technology transfer partnerships is illustrative.[19] After compiling a database of roughly 150 transactions, Oxley clustered the hybrid relationships into three broad categories: "unilateral" contracts such as licensing agreements or research and development services; "bilateral" contracts[20] such as cross-licensing agreements or joint research efforts; and "equity-based" alliances such as independent joint ventures.[21] The first class of hybrid transactions was said to lie closer to the extreme of spot-market exchange, while the last class approached an intra-firm hierarchical arrangement. Oxley then proposed a series of hypotheses linking observable characteristics to organizational

[17] This species of organizational form has been the subject of much of the research related to hybrid contracting. See, e.g., J. Michael Geringer & Louis Herbert, Control and Performance of International Joint Ventures, 20 J. Int'l. Bus. Stud. 235 (1989); Benjamin Gomes-Casseres, Ownership Structures of Foreign Subsidiaries: Theory and Evidence, 11 J. Econ. Behav. & Org. 1 (1989); Gary P. Pisano, Using Equity Participation to Support Exchange: Evidence from the Biotechnology Industry, 5 J.L. Econ. & Org. 109 (1989).

[18] Hybrid contracting may serve other, less desirable, roles. For example, Professors Jennifer Arlen and Eric Talley argue that managers may form joint ventures with stringent change of control penalties as an anti-takeover and managerial entrenchment device. See Jennifer Arlen & Eric Talley, Unregulable Defenses and the Perils of Shareholder Choice, 152 U. Pa. L. Rev. 577, 582 (2003). This manifestation of the agency cost problem between managers and shareholders might theoretically appear in an outsourcing contract, thereby distorting "rational" production and governance relationships, but I do not believe that stringent change of control penalties are commonly used in this context, and they do not feature in the contracts examined for this empirical project.

[19] Oxley, supra note 4.

[20] The use of the terms "unilateral" and "bilateral" relate to the identity of the parties supplying the technology, not to their more specialized meanings in contract law.

[21] Oxley, supra note 4, at 391–92.

form—for example, an equity based relationship might be more likely to occur with deals involving product design[22]—and ran statistical analyses to test her predictions.[23] Ultimately, she found that the form of alliance did seem to depend on transactional attributes and not on other characteristics of the partner firms.[24] Other empirical projects on hybrid organization follow in this same tradition.[25]

There are at least two fundamental challenges, however, to this empirical work. The first problem, common to many empirical endeavors, is how to select the independent variables. It is rarely possible, for example, to measure directly whether one transaction involves especially high levels of relationship specificity. Similarly, how should we assess economic complexity or uncertainty? These concerns have not deterred economists, of course, and a wide range of survey techniques[26] or creative proxy variables[27] are used

[22] See id. at 395 ("A more hierarchical governance mode will be chosen when an alliance involves product or process design than when only production or marketing activities are undertaken.").

[23] The key independent variables in this study include transaction type (design, production, marketing, etc.), technological scope, geographical scope, and the number of partners in the agreement. Control variables are used for industry, firm size, and alliance experience. See id. at 397–401.

[24] Id. at 406. It is worth noting, however, that Oxley also qualified her results due to limited information about some transactions. Id.

[25] See, e.g., Peter Lorange & Johan Roos, Strategic Alliances: Formation, Implementation, and Evolution 44–50 (1992); Ranjay Gulati, Does Familiarity Breed Trust?: The Implications of Repeated Ties for Contractual Choice in Alliances, 38 Acad. Mgmt. J. 85, 105–07 (1995); Gary P. Pisano, The R&D Boundaries of the Firm: An Empirical Analysis, 35 Admin. Sci. Q. 153, 173–74 (1990); Pisano, supra note 17, at 122–24.

[26] One common approach is to survey the managers involved in each transaction, asking them to rate various deals (usually on Likert-type scales) in terms that can be translated into asset specificity. For example, "to what degree does this investment have uses outside the specific transaction? Please answer from 1 (no outside uses) to 7 (completely fungible)." Of course, the subjective nature of these surveys makes it futile to compare the studies across industries. And the self-reported nature of this data introduces the usual risks of bias.

[27] The Oxley study, for instance, hypothesizes that technology design partnerships are more likely to involve relation-specific assets than production or marketing deals. See Oxley, supra note 4, at 394–95. Other studies select proxy variables that may be directly related to elements of asset specificity. See, e.g., Paul L. Joskow, Vertical Integration and Long-Term Contracts: The Case of Coal-Burning Electric Generating Plants, 1 J.L. Econ. & Org. 33, 38, 47 (1985) (using physical proximity, or site specificity, as a proxy for relationship specific investment); Scott E. Masten et al., The Costs of Organization, 7 J.L. Econ. & Org. 1, 9 (1991) (using spatial or temporal proximity

to finesse this problem. Ultimately, however, it is fair to question whether researchers are really measuring variables that can be linked back to the key considerations underlying transaction cost theories.

The second problem relates to the granularity of the dependent variable—that is, the number and type of transaction classes. Should researchers divide contractual structures into three broad classes? Ten? A thousand? And how should we determine the salient characteristics that distinguish one class of entity from another? The typical response is to group a complete spectrum of hybrid transactions into a few broad tranches to form a tractable research methodology. But these relationships are complicated, and this approach may miss important nuances.[28]

In short, it is difficult to draw grand conclusions from a high level survey of this varied terrain. For this reason, a more practical approach may be to examine just one form of hybrid contracting at a time. Accordingly, let me turn to the primary focus of this Article: business outsourcing transactions.

C. Business Outsourcing Transactions

Business outsourcing occurs when a firm decides to stop performing a given activity internally and hires a vendor to take over production of the input.[29] The assets and employees used to gener-

as a proxy variable); Scott E. Masten, The Organization of Production: Evidence from the Aerospace Industry, 27 J.L. & Econ. 403, 409 (1984) (using product complexity as a proxy variable).

[28] Oxley nicely describes the challenge:

> Making fine-grained assessments of the governance attributes of a particular alliance requires information on a long "list" of features, including formal and informal monitoring or reporting requirements, provisions for third-party arbitration, details of assignments of managerial control rights, and the extent of effective hostage exchanges built into the agreement. Moreover, even with all the necessary data in hand, it is not clear how we compare two alliances in which different combinations of these various governance instruments are present.

Oxley, supra note 4, at 391. For this reason, some research focuses on "deep" analysis of a few, related transactions. This qualitative case study approach thus engenders an informed comparison of transactional details but raises questions about the extent to which the findings enjoy broader applicability.

[29] See K. Matthew Gilley & Abdul Rasheed, Making More by Doing Less: An Analysis of Outsourcing and its Effects on Firm Performance, 26 J. Mgmt. 763, 764 (2000) (defining outsourcing as "a discontinuation of internal production (whether it

ate this good or service may move to the vendor (as is common with information technology ("IT") infrastructure outsourcing), or they may simply be replaced with the vendor's own resources. The strategic and economic factors driving an outsourcing move are varied—and quite similar to the considerations underlying an initial "make or buy" production decision. Indeed, outsourcing transactions should simply be viewed as the result of a firm changing its mind, for whatever reason, on this question and deciding to "buy" what it used to "make." The fact that a client enjoys previous experience with, and intimate knowledge of, the business activity, however, may have implications for the way that these transactions are structured.[30]

The rise of business outsourcing and the resulting macroeconomic effects have received a great deal of attention over the past decade.[31] Likewise, several commentators have pursued the microeconomic question of why firms tend to outsource some activities but not others. By contrast, there has been surprisingly little work on the important question of how outsourcing transactions are conducted—that is, what governance terms and norms are adopted in the formal contracts and informal relationships of the parties.[32]

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be production of goods or services) and an initiation of procurement from outside suppliers"). Even this definition can be complicated, however, when a firm elects to "co-source" the activity by moving some production to a vendor while continuing to perform the same activity, albeit on a smaller scale, within the firm. See Parmigiani, supra note 3.

[30] For example, firms may become especially cautious when moving a familiar activity outside the corporate fold. Because they know every step needed to perform this activity successfully, the transaction costs of specifying the rules of vendor compliance may be lower than an activity where the buyer of the service has no previous experience "making the sausage."

[31] In this context, it is important to distinguish offshoring from outsourcing. Offshoring relates to the movement of production overseas—either through a captive subsidiary or through an outsourcing transaction that involves a distinct legal entity. This location decision often receives the bulk of macroeconomic attention—as opposed to the outsourcing transactions that occur between two domestic firms (onshore outsourcing).

[32] Two recent studies do suggest a rising interest in this topic. See Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration, 109 Colum. L. Rev. 431, 458–71 (2009) (analyzing three outsourcing transactions in the context of inter-organizational innovation); Margaret M. Blair & Erin O'Hara, Outsourcing, Modularity and the Theory of the Firm (Vanderbilt Univ. Law Sch. Conference on Legal Issues in the Governance of Supply Chains, Working Paper No. 09-19, 2009), available at http://ssrn.com/abstract

With respect to the macroeconomic questions surrounding outsourcing, hardly a week goes by without a story related to the rise of globalization and the impact of offshore outsourcing. The topic understandably attracts many different and passionate perspectives. Yet this big picture work, while important, tells us little about the microeconomic questions of why and how firms embrace outsourcing.

The first part of the microeconomic puzzle—why firms outsource—has received extensive attention. A variety of academic and practical articles examine and advise on various deal rationales, which range from simple labor cost arbitrage to increased operational flexibility to strategic reinvention.[33] This work also explores whether certain types of business activities are especially suited for outsourcing.

For example, the IT sector was an early adopter of outsourcing, and the academic research on where and why firms outsource IT is more developed here than for other industries or functions.[34] As with most empirical work, there are challenges and inconsistencies in the way that the key contextual variables (such as asset specificity, complexity, and interaction frequency) are operationalized in the studies.[35] But, on balance, this research offers at least tentative

=1443357 (analyzing seven outsourcing transactions in the context of a push towards business process modularity).

[33] See, e.g., Vivek Agrawal et al., Offshoring and Beyond, McKinsey Q., Dec. 2003, at 25, 34; Ravi Aron & Jitendra V. Singh, Getting Offshoring Right, Harv. Bus. Rev., Dec. 2005, at 135, 137; Thomas H. Davenport, The Coming Commoditization of Processes, Harv. Bus. Rev., June 2005, at 100, 102; Diana Farrell, Smarter Offshoring, Harv. Bus. Rev., June 2006, at 84, 88, 92; Yongmin Chen et al., Physical Capital, Knowledge Capital and the Choice Between FDI and Outsourcing (Nat'l Bur. of Econ. Research, Working Paper 14515, 2008), available at http://papers.nber.org/ papers/w14515 (modeling the choice between captive and outsourced offshoring as influenced by the ratio of knowledge capital to physical capital).

[34] See Pankaj Nagpal, Use of Transaction Cost Economics to Study Information Technology Outsourcing: Over-Application or Under-Theorizing? (Sprouts: Working Papers on Info. Env'ts, Syss. & Orgs., 2004), available at http://ssrn.com/abstract =882863 (reviewing the literature on IT outsourcing transactions).

[35] Compare Mary C. Lacity & Leslie P. Willcocks, Interpreting Information Technology Sourcing Decisions From a Transaction Cost Perspective: Findings and Critique, 5 Acct. Mgmt. & Info. Tech. 203, 218–19 (1995) (bifurcating asset specificity between specialized IT versus support/commodity IT), with Soon Ang & Larry L. Cummings, Strategic Response to Institutional Influences on Information Systems Outsourcing, 8 Org. Sci. 235, 241 (1997) (operationalizing asset specificity as the degree of "investment in specialized equipment . . . specialized technical skills specific

support for the proposition that firms tend to hold on to activities with acute levels of hold-up risk, while relinquishing activities that are less specialized or less sensitive to agency costs.[36] For instance, at least two case studies suggest that routine technology (such as basic infrastructure or standardized software) has historically been outsourced at a greater rate than more specialized functions (such as the development of customized software).[37] This is perhaps not too surprising: everything else being equal, we might expect firms to approach exotic outsourcing projects cautiously.

Once firms do decide to take the plunge, however, we know much less about how they execute against this outsourcing decision. What are the key terms of each transaction? Does the contractual structure of these deals differ significantly? And, if so, can this diversity be understood as the logical result of alternative strategies for addressing the varied governance problems inherent in different types of outsourcing transactions?

The fundamental contracting concern in business outsourcing is the familiar problem of incompleteness. It is prohibitively expensive for parties to specify fully the precise activities to be conducted, the exact payoffs from an outsourcing project, and the optimal responses to every possible contingency.[38] Likewise, it is

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to . . . [buyer firm,] . . . and specific business skills and knowledge pertaining to [buyer]").

[36] See, e.g., Ang & Cummings, supra note 35, at 240; Benoit A. Aubert et al., A Transaction Cost Approach to Outsourcing Behavior: Some Empirical Evidence, 30 Info. & Mgmt. 51, 53 (1996); Thomas D. Clark, Jr. et al., The Outsourcing of Information Services: Transforming the Nature of Business in the Information Industry, 10 J. Info. Tech. 221, 230–31 (1995); see also Nagpal, supra note 34, at 13 (finding mixed support for transaction cost economics as an explanatory theory).

[37] Aubert et al., supra note 36, at 57–59; Ari Heiskanen et al., Software Contracting: A Process Model Approach, 1996 Proc. of Int'l Conf. Info. Syss. 51, 58–59 (2006). The rise of standardized processes (and thus greater transparency) for conducting customized software projects has certainly increased the willingness of firms to outsource in this area since these case studies have taken place. See, e.g., Davenport, supra note 33, at 107.

[38] On the general problem of incomplete contracting, see Foss, supra note 6, at 638–43; Williamson, Economic Institutions, supra note 6, at 333–38; Williamson, Markets and Hierarchies, supra note 6, at 91–94; Williamson, Mechanisms, supra note 6, at 56, 131; Grossman & Hart, supra note 6, at 716–18. On the legal problem of incomplete contracting, see George M. Cohen, Implied Terms and Interpretation in Contract Law, *in* 3 Encyclopedia of Law and Economics 78, 81 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000) (stating that "[t]he costs of contractual completeness . . . often exceed the benefits," and, as such, an incomplete contract may be an efficient con-

uneconomical for parties to invest in omnipresent monitoring that ensures absolute compliance with contractual requirements. This introduces the specter of moral hazard on either side of a transaction. An outsourcing vendor may deliver inferior products or services to its client, for example, expecting that information asymmetries will cloud the detection of poor performance.[39] Or a client may unfairly withhold a deserved payment, demanding greater levels of performance or some other adjustment, after the vendor has sunk investments in specialized assets or human capital to perform the activity. The aggrieved party always has the option to respond with a lawsuit, but these bilateral misappropriation hazards can be difficult to address in court, given the limits of third-party verification.[40]

Despite the theoretical impossibility of writing a complete contract, some outsourcing transactions almost seem to give it a go. These deals are known for taking great pains to define the contours of the relationship between client and vendor. The contracts can run for hundreds of pages and may involve delicate interplay between a master agreement (setting the broad governance framework for the relationship), detailed work orders (setting specific tasks), and ongoing service level benchmarks (setting minimum performance requirements).[41] This transactional complexity, combined with the dense veil of confidentiality that often accompanies outsourcing, can make it difficult to launch an empirical investigation of these contracts.

This does not mean, however, that scholars have ignored the problem completely. Professors Jérôme Barthélemy and Bertrand Quélin's study of eighty-two outsourcing transactions covering a

tract); Alan Schwartz & Robert E. Scott, Contract Theory and the Limits of Contract Law, 113 Yale L.J. 541, 594–95 (2003).

[39] This is true because a vendor does not bear the ultimate cost of sloppy performance—assuming non-detection by the client or other potential customers. This is just one manifestation of the appropriation problem; there are countless other varieties. See George S. Geis, Business Outsourcing and the Agency Cost Problem, 82 Notre Dame L. Rev. 955, 977–82 (2007) (describing and illustrating various forms of the agency cost problem in outsourcing transactions).

[40] See Cohen supra note 38, at 91–92; Schwartz & Scott, supra note 38, at 605–08.

[41] See Geis, supra note 39, at 984–89 (discussing the interlocking legal documents that are sometimes used to form and modify outsourcing transactions). Of course, these deals are not uniquely bloated; other hybrid relationships, such as joint ventures or franchise agreements, may enact very detailed rules for conducting business activity.

six-year period starting in 1992 considers the relationship between contractual complexity and the strategic importance of an outsourced activity.[42] Contractual complexity (operationalized across five categories of terms[43]) is found to increase when an outsourced activity poses high "switching costs" or relates to a "core" strategic activity of the client firm.[44] More generally, the study seeks to unify transaction cost economics with a resource-based view of the firm.[45]

This interesting work offers a helpful taxonomy of outsourcing contract terms, but it should not be viewed as the final word on the subject. For one thing, the categories and sub-variables do not capture the full range of terms that parties adopt in their contracts.[46] Second, the breadth and pace of outsourcing has accelerated in the past decade, warranting a fresh look at the way that these contracts are structured. Finally, and most importantly, the problem is more nuanced than previous studies suggest.

[42] Jérôme Barthélemy & Bertrand V. Quélin, Complexity of Outsourcing Contracts and *Ex Post* Transaction Costs: An Empirical Investigation, 43 J. Mgmt. Stud. 1775 (2006); see also Jérôme Barthélemy, IT Outsourcing: The Goldilocks Strategy, Wall St. J., Dec. 15, 2008, at R4 (discussing three different contracting experiences of one outsourcing client).

[43] The five categories of terms are control, incentives, price, flexibility, and contract termination. Barthélemy & Quélin, supra note 42, at 1784–85. Each category is defined, in turn, by three to five dummy variables arranged in increasing order of complexity. For example, the price category is defined by the three dummy variables of fixed price, price indexing on a market average, and price indexing on a "best practices" benchmark. Id. at 1785.

[44] Id. at 1779–80, 1789. The authors operationalize switching costs as the cost of changing vendors, the time needed to do so, the cost of reintegrating an outsourced activity, and the time needed to do so. Id. at 1783–84. An activity is defined as "close" to a firm's core when it contributes heavily to overall profitability, is tightly integrated with other activities, allows differentiation from competitors, and is viewed by top managers as strategic. Id. at 1784. A third hypothesis—that contracts grow in complexity when the outsourcing project requires specialized human assets—was not supported by the analysis. Id. at 1780, 1789.

[45] Resource-based views of the firm hypothesize that competitive advantage arises when firms are able to gather valuable asset combinations that defy easy imitation by competitors. See, e.g., Birger Wernerfelt, A Resource-based View of the Firm, 5 Strat. Mgmt. J. 171, 173 (1984); Birger Wernerfelt, The Resource-Based View of the Firm: Ten Years After, 16 Strat. Mgmt. J. 171 (1995).

[46] For example, returning to the pricing variable, some outsourcing agreements will use cost-plus pricing (perhaps with a minimum or maximum) in the place of fixed fee or benchmarked prices. Alternatively, they may employ earn-out clauses or contingent compensation.

This is true because writing a complex contract is not the only way to mitigate appropriation hazards in an outsourcing relationship. A different strategy for managing critical relationships is to incorporate simple governance terms that move the contract away from a detailed arm's-length affair and closer to a hierarchical partnership. For example, an outsourcing transaction might grant control rights to clients, allowing them to hire and fire key vendor employees, determine the precise steps that a vendor must follow when performing certain activities (without needing to delineate these exact steps in an upfront contract), or take other actions quite similar to those that would be permitted with a fully-owned subsidiary. Moreover, some of these control rights may act as substitutes for other terms that strive to align incentives—meaning that a contract may not appear very "complex" yet nevertheless convey significant hierarchical control to a counterparty. It is important, therefore, to go beyond any aggregate measure of complexity and to look more carefully at specific terms, structures, and features in a micro-analytical manner.

II. RESEARCH DESIGN, DATA COLLECTION, AND VARIABLE CONSTRUCTION

This project's sampling strategy is designed to generate a collection of transactions that govern a singular species of organizational contracting. An exclusive focus on outsourcing makes it possible to compare key features across a variety of economic contexts. The emphasis is on depth, not breadth; a relatively small sample allows compilation of a detailed data set that scours as much information as possible from each observation.

A. Database Construction

The data for this study come from an online database of business contracts compiled and maintained by OneCle, a legal research firm providing access to a wide range of executed contracts and other legal materials. The majority of contracts in the OneCle database are taken from public filings with the Securities and Exchange Commission ("SEC"), a fact which may introduce several biases (as discussed below).

The immediate sample of outsourcing contracts was identified through a systematic screening of approximately 1260 transactions in OneCle's "Services Agreements" database.[47] The majority of these services agreements do not relate to outsourcing; they govern supply relationships for activities that a buyer has traditionally sourced via external means. But a subset of the 1260 contracts can be identified as outsourcing deals, and therefore as relevant to this study.

More specifically, there are three different ways to screen out the transactions that should "count" as outsourcing. First, some contracts are easy to identify because they explicitly state (in preliminary recitals or elsewhere) that the deal involves outsourcing. Second, even if the parties do not plainly post an outsourcing label on their contracts, this fact can often be ascertained when specific asset transfers from client to vendor are coupled with a promise to use those assets to provide ongoing services to the client. Finally, it is occasionally possible to classify a contract as an outsourcing transaction through other contextual means, such as when a firm contracts for services that clearly overlap with internal capabilities.[48]

This screening effort ultimately resulted in a sample database of sixty outsourcing contracts spanning the fourteen-year period from 1994 to 2007.[49] The transactions encompass a variety of geographies, industries, and business functions; Table 1 presents an overview of selected sample characteristics.

[47] This full collection of contracts is available at http://www.onecle.com/. The 1260 total is as of November 1, 2008; OneCle continues to add contracts to its database on a regular basis.

[48] To be sure, this last classification method depends on subjective evaluation and sometimes on outside knowledge that the outsourcing client enjoyed prior capabilities to perform the specific transactional activity. In a few cases, it was necessary to reverse the initial outsourcing classification when the coding phase of the project revealed that the contract governed a business expansion outside of the client's historical domain. For example, a purported outsourcing project might be reclassified as "non-outsourcing" if it involved foreign distribution capabilities beyond the scope of the client's previous business.

[49] Appendix A provides the full schedule of contracts in the data set.

Table 1. Sample Characteristics

Panel A: Sample Selection			
Sample	Number of Contracts	Onshore[50]	Offshore
Total Service Contracts	1260	n/a	n/a
Final Outsourcing Sample	60	35	12
Panel B: Date of Execution			
1994	3	1	1
1995	1	1	-
1996	-	-	-
1997	7	2	2
1998	5	3	1
1999	7	5	2
2000	4	3	1
2001	8	6	-
2002	10	4	3
2003	7	5	1
2004	4	2	1
2005	1	-	-
2006	2	2	-
2007	1	1	-
TOTAL	60	35	12
Panel C: Client Industry			
Automotive	1	1	-
Consumer Goods	2	-	2
Electronics	2	-	2
Energy	1	-	1
Financial Services	10	8	-
Health Care	3	2	1
Insurance	2	1	-
IT	9	4	4

[50] The division of transactions between onshore and offshore outsourcing does not sum to the total because location information has been redacted (or is not stated) in some contracts.

Manufacturing	2	2	-
Media / Entertainment	4	3	1
Pharmaceutical	4	3	-
Professional Services	1	1	-
Retail	2	2	-
Telecom.	2	-	1
Travel / Dining	3	3	-
Unidentified	12	5	-
TOTAL	60	35	12
Panel D: Primary Business Function to Be Outsourced			
Accounting	1	1	-
Call Center / Customer Support	3	1	2
Clinical Trials	3	2	-
Data Management / Analysis	4	2	1
Distribution Services	1	1	-
Human Resources	7	4	2
IT Hosting	11	9	-
IT Support & Services	7	2	2
Maintenance	2	2	-
Manufacturing	3	-	3
Marketing Services	1	1	-
Operations Management	3	3	-
Software Development	11	6	2
Telecom.	3	1	-
TOTAL	60	35	12

At the outset, it is important to acknowledge two limitations of this data set. First, there is a bias toward public firm contracts. In any given transaction, one counterparty may be a private firm, but the data set excludes agreements where both parties are exempt from SEC reporting requirements. Second, the data points are limited to situations where at least one of the counterparties believes that the transaction must be disclosed in a public filing. As there are no bright line rules for when an outsourcing deal must be revealed, similarly situated principals might differ in their determination of whether any given transaction represents a material event.

This means that the sample may underrepresent both minor outsourcing transactions (which firms feel they need not disclose under SEC materiality standards) and highly sensitive transactions (which firms may conceal to avoid political backlash or competitor imitation).

These selection biases and omissions arguably render the data unsuitable for any analysis examining overall levels of outsourcing activity such as which industries or business functions are more likely to involve outsourcing.[51] Likewise, we should resist any temptation to draw hard conclusions about the frequency of specific contracting strategies. (I do report qualified positive findings below, but these statistics should be understood as unique to this sample, not extendable to a broader population of outsourcing deals.) It is unlikely, however, that these omissions will distort the underlying contracting incentives or systematically bias the manner in which individual parties negotiate their relationships. Thus, the contracts in this data set are suitable for micro-analytical coding and empirical assessment related to the governance role of outsourcing terms in individual relationships. Of course, future work in this area may nevertheless benefit from the collection and analysis of data from alternative sources.

B. Variables

The goals of this study require construction of a significant number of variables based on a careful dissection of each contract. This micro-analytical collection and synthesis of contractual variables is necessary for a positive report on how parties are structuring their outsourcing relationships; it is also a prerequisite for more ambitious work that tests theoretical claims related to the choice of contractual framework (though not all of the variables will be used for this latter analysis due to the small sample size). Consistent with these objectives, I have divided the contractual coding into four broad categories: (1) descriptive features; (2) terms governing financial incentives such as pricing, loss, and reward; (3) terms allo-

[51] For example, many of the contracts involve the financial services industry and various IT functions. While this industry and business sector have indeed been areas of emphasis for services-based outsourcing, we cannot use the data to support this fact.

cating control rights; and (4) terms governing duration and dispute resolution.[52] This Section describes each of these categories and variables in turn.[53]

1. Descriptive Features

The first group of variables captures general contracting features related to each outsourcing transaction. This descriptive data set provides basic information on the parties and business activity; some of these variables will also serve as proxy variables during the second phase of empirical analysis. It includes the following fields:

- Client: This text field identifies the name of the outsourcing client firm.
- Vendor: This text field identifies the name of the outsourcing vendor firm.
- Start Date: This variable indicates the year that the parties initiated their contract.
- Function1, Function2, and Function3: These fields identify the primary categories of business activity (up to three) covered by the contract. Panel D of Table 1 lists the primary categories of functions, including manufacturing, call center support, software development, human resources support, and other business activities.
- Industry: This field identifies the primary industry of the outsourcing client.
- Client Location: This field identifies the primary country in which the client operates.
- Vendor Location: This field indicates the primary country where the work will be performed (not necessarily the location where the vendor maintains its corporate headquarters).

[52] This perhaps goes without saying, but the collection of variables does not provide information on *all* terms in the outsourcing contracts. Many of the transactions include, for example, provisions relating to confidentiality, IP rights, indemnification, force majeure, contractual integration, choice of law, and other features that, while potentially important, speak less forcefully to the fundamental organizational issues of reward, control, and governance.

[53] A blank coding sheet, providing additional details on the variables, can be found in Appendix B. A file with all raw coding results is available from the author upon request.

- Other Vendors: In some cases, a client firm will hire multiple vendors to conduct identical or closely-related tasks.[54] I record a dummy variable indicating whether this has occurred.

2. Financial Incentive Terms

The second category of variables covers incentives relating to payment structure, additional pecuniary rewards, and financial loss:

- Pricing Structure: Firms will typically set prices according to one of several different frameworks. They may use flat fee pricing, cost-plus pricing, or some combination of the two (such as a fixed minimum amount plus a variable volume payment). Still another strategy involves setting prices based on a guaranteed minimum savings rate for the client. I record a code for this variable corresponding to the pricing framework selected by the parties.
- Earn-Out: Some contracts will include earn-out clauses, under which certain milestones must be met for the vendor to receive additional payment. This variable indicates whether such an earn-out is present.
- Equity Sharing: Theoretically, the parties may use equity to align financial interests. Either party may purchase the stake: vendors may buy shares in a client to benefit from outsourcing improvements, or clients may buy shares in a vendor to deter opportunism. This variable indicates whether an equity sharing arrangement is present.
- Other Incentives: Many other terms might be used to influence incentives. For example, some contracts include penalties for lapses in acceptable service levels. This variable identifies whether additional incentive terms have been included in the contract.

[54] See Geis, supra note 39, at 989–91 (describing, with examples, some theoretical benefits of using multiple outsourcing vendors).

3. Terms Allocating Control Rights

The third (and most extensive) group of variables examines the division of operational control between client and vendor. Over the years, a thick menu of contractual strategies has arisen for governing ongoing activity and, perhaps, minimizing the agency and hold-up risks faced by both parties. I record information on the presence of the following terms:

- Manager Appointment Rights: This variable indicates whether the client has the right to appoint key vendor employees to perform or direct outsourcing activities.
- Manager Termination Rights: Conversely, this variable indicates whether the client can terminate selected vendor employees (from the project, but not necessarily from the vendor's employment) when they are dissatisfied with the relationship.
- Business Process Control Rights: In some cases, a client may negotiate for the right to set or adjust the specific manner in which the vendor will carry out some portion of the business activity. This variable identifies whether these control rights are present.
- Mandatory Training Procedures: This variable indicates whether the contract requires vendor employees to go through a mandatory training program (typically established, and sometimes administered, by the client firm) before initiating work on the outsourcing project.
- Direct Control Carve-Outs: A client may contract to assume direct control over a certain part of the outsourced activity—even though ultimate ownership of the assets used to perform the activity rests with the vendor. This variable identifies whether the contract includes provisions for direct control.
- Dedicated Facility: This variable indicates whether the vendor will dedicate exclusive facilities or assets such as specialized equipment or a separately keyed office wing to the client's project.
- Service Level Commitments: Often the parties will negotiate ongoing performance benchmarks defining accept-

able levels of vendor service.[55] This variable identifies whether the parties include service level agreements ("SLAs"), and, if so, whether these clauses are sparse or extensive.

- SLA Resets: Recognizing that business or technological advances over time are likely to affect the desired level of service, the parties will sometime set internal procedures or external metrics for adjusting the SLA benchmarks in future years. This variable indicates whether these SLA resets are present.
- Client Monitoring Rights: This variable identifies whether the contract includes terms allowing the client to conduct audits (ongoing or periodic) related to the performance of the work or the accuracy of billing statements.
- Third Party Monitoring: Related to the above variable, clients will sometimes negotiate for third party monitoring rights, either by reference to third party performance standards or by allowing a direct, third party audit. This variable identifies whether these monitoring rights are present.
- Reporting Requirements: Finally, outsourcing transactions may require vendors to submit ongoing reports related to the activity conducted, service level metrics, or other key benchmarks. This variable identifies the presence and extent of any such reporting requirements.

4. Duration and Dispute Resolution

The last category of variables involves terms governing project duration. In a sense, exit rights provide the ultimate check on opportunism because a party can simply abandon the project if agency problems materialize (assuming, perhaps strongly, that the aggrieved party recognizes its plight). On the other hand, easy exit may deter specific investment in a project or relationship.[56] The ul-

[55] For example, parties to an IT outsourcing deal may write in specific requirements relating to data availability, transfer speed, help desk responses, and a myriad of other issues. See, e.g., id. at 986 n.140.

[56] This dual-edged nature of exit rights—and the flip side of exit rights, the ability to "lock in" capital—has been discussed extensively in the legal literature. See, e.g.,

timate contract may therefore include nuanced compromises on duration. This Section also gathers data on the (somewhat) related issue of dispute resolution. Specifically, I construct the following six variables:

- Length: This variable refers to the anticipated length, in years, of the outsourcing project. Renewal rights that are subject to future mutual agreement are not included.
- For Cause Exit: A client will sometimes secure the right to cancel a project if the vendor fails to meet ongoing performance requirements (typically, those set out in the SLA). This variable indicates the presence of these for cause exit terms.
- For Convenience Exit: A different class of exit rights allows the client (or, less commonly, the vendor) to cancel the project for reasons unrelated to performance. In essence, the vendor writes the client a put option on the project, though the price for exercising the cancellation option (through a penalty fee) is typically higher than that incurred via for cause exit.[57] This variable indicates the presence of for convenience exit rights.
- Escrowing Provisions: The intimate and relationship-specific nature of some outsourcing projects may make it difficult for a client to terminate a project, even when it becomes clear that the vendor is cutting corners or taking advantage of their position. One contractual response is to demand upfront escrow provisions where key assets (such as software source code) or other information (such as the identity and contact information of key vendor employees) are safeguarded with an independent third

Margaret M. Blair, Locking In Capital: What Corporate Law Achieved for Business Organizers in the Nineteenth Century, 51 UCLA L. Rev. 387 (2003) (applying the concept to corporations); Larry E. Ribstein, A Statutory Approach to Partner Dissociation, 65 Wash. U. L.Q. 357, 413–14 (1987) (partnerships); D. Gordon Smith, The Exit Structure of Strategic Alliances, 2005 U. Ill. L. Rev. 303, 311–12 (2005) (business alliances); D. Gordon Smith, The Exit Structure of Venture Capital, 53 UCLA L. Rev. 315, 318 (2005) (venture capital finance).

[57] Given the incremental fee associated with a convenience exit, the parties will occasionally litigate about which set of terms governs an exit. See, e.g., Carol Sliwa, Sears Ends IT Pact; CSC Seeks Payment, Computerworld, May 23, 2005, at 1, 55, available at http://www.computerworld.com/s/article/101910/Sears_CSC_fighting_over_IT_contract_termination_fees.

party. The client then has the right to access these assets under predefined escrow instructions if the vendor behaves badly. This variable indicates whether the contract includes escrowing provisions.

- Internal Dispute Governance: Some contracts will establish internal governance procedures to manage any conflicts that arise over the course of the relationship. For example, the parties may each assign a project manager to comprise an initial dispute resolution board and subject the decisions of this body to several higher levels of review, perhaps ultimately arriving on the desk of a Chief Operating Officer or Senior Vice President. The obvious goal is to replace detailed upfront transaction costs with a reasonable mechanism for addressing disagreement over future contingencies. This variable indicates the presence and extent of an internal dispute resolution framework.
- Arbitration: Finally, this variable identifies whether the parties have agreed to use binding arbitration to resolve any disputes that cannot be managed internally.

Having defined the key variables in this study, let me now turn to a descriptive analysis of the terms adopted in the sample of outsourcing contracts. In addition to reporting on the incidence, substance, and quality of specific governance provisions, I try to establish some broader themes related to the tradeoffs between contractual complexity and relational contracting.

III. POSITIVE ANALYSIS OF OUTSOURCING CONTRACTS

A. Term Diversity

The high-level takeaway from my positive examination is that there is no one-size-fits-all mold for stamping out business outsourcing deals; firms employ great diversity in their contracting. A crude way to make this point is simply to note the length of each agreement: some contracts are just a few pages long, while others run for hundreds of pages with many supporting schedules.[58]

[58] To quickly illustrate, Contract 1 in the sample (the American Tissue deal) consists of just 722 words, while Contract 18 in the sample (the BP-Exult deal) uses over 95,000 words to establish the relationship.

Of course, it is the substance of these agreements, not their length, that matters. And here there is plenty of evidence that parties are adopting very different contracting strategies as they set mechanisms for governing fundamental issues like financial risk, control, and exit.

1. Dividing Financial Gains

The primary knife that outsourcing partners use to divide the gains and losses from trade comes in the form of vendor compensation. The price that a client pays for outsourcing services—and, more importantly, the way that that price is established—determines who will capture upside surplus from a blockbuster deal or who will suffer financial loss if a project fails. How have the parties in this sample structured their pricing mechanisms?

One common approach is for the vendor to set hourly employee billing rates, analogous to the standard pricing model used by law firms or other professionals, and simply to bill the client according to time worked on a project.[59] Hourly or cost-plus billing has the obvious advantage of linking compensation to some measure of effort in a way that fixed fee billing does not. But as savvy consumers of legal services can attest, hourly billing agreements sometimes lead to agency cost distortions where vendors work inefficiently or travel down questionable project side-alleys.[60] Perhaps anticipating these concerns, some parties have adopted more incentive-compatible methods for sharing financial gains.

[59] For example, see Contract 37 in the sample, Extended Development Center Agreement Between APAR Infotech Corp. and Portal Software, Inc. (Aug. 29, 2002) § 10, app. A, http://contracts.onecle.com/portal/apar.dev.2002.08.29.shtml (charging an hourly rate for an offshore software development project with different fees for managers, senior engineers, and engineers; specific dollar rates have been redacted). Sometimes an overall cap is placed on the fees as a way of mitigating "runaway project" risk. E.g., Master Services Agreement Between General Electric Co. and ARIS Corp. (Apr. 20, 2000) §12, http://contracts.onecle.com/aris/ge.svc.2000.04.20.shtml (contact 24).

[60] See, e.g., Geis, supra note 39, at 991–93 (discussing these concerns in detail).

Table 2. Overview of Vendor Compensation Frameworks (Number of Contracts in Sample)

Primary Framework	Total Contracts	With SLA Incentives
Fixed Fee	7	3
Hourly Billing / Cost Plus	21	14
Hourly Billing with Floor	22	9
Guaranteed Minimum Savings	1	1
Other	9	5
TOTAL	60	32

A second approach is to bill on a fixed fee basis while imposing significant financial penalties or rewards that attach to the quality of service provided. Some of the IT hosting contracts—contracts in which a vendor provides hardened physical real estate and sometimes IT hardware or services—nicely illustrate this basic framework. A vendor will typically charge a fixed fee tendered monthly or annually as the price of hosting a client's technology, but the parties may also use detailed SLAs with strict financial penalties for missed benchmarks. For example, if a client's server goes down and cannot be restored in two hours, then the client might receive a service credit equal to several days' pay.[61] The provisions can grow elaborate, with a long menu of financial penalties for slowed packet transmission rates, bit-loss frequency, and delayed service call response times.[62] In rejoinder, vendors will sometimes negotiate service credit caps (for example, no more than two weeks of free service per month) to constrain the fallout from operational failure.

[61] E.g., e-business Hosting Agreement Between International Business Machines Corp. (IBM) and uDate.com, Inc. (June 21, 2002) Attachment A § 5, http://contracts.onecle.com/udate/ibm.host.shtml (establishing service credit rebates for deficient SLA performance) (Contract 43).

[62] Id; see also Robert D. Austin, Web and IT Hosting Facilities, Harv. Bus. Sch. Tech. Note 9-601-134 (Mar. 4, 2003) (illustrating various SLA-linked responses to common webhosting difficulties).

A quick glance at Table 2 confirms the popularity of hourly billing and fixed fee billing in this sample.[63] Indeed, many of the contracts combine elements of both pricing structures by using hourly billing schedules plus a fixed fee floor. Yet the data set also exposes other strategies for carving up financial risk and reward. One contract, for example, reimburses a vendor's actual costs plus a guaranteed thirty percent project margin, but this margin percentage is adjusted depending on vendor utilization rates.[64] This has the practical effect of encouraging vendors to make the capital investments necessary to conduct the project while also discouraging overinvestment. Another interesting deal couples the simplest of all possible payment schedules—an absolute fixed fee of roughly $5.4 million—with very specific descriptions of monthly project deliverables for each of its twenty installments.[65] The deal has no SLA penalties, but it incorporates extremely lenient exit provisions, providing a sort of "divisible" contract to motivate the vendor and to protect the client's interests. Still another contract for cinema management services uses a revenue sharing arrangement, where compensation for the operating vendor is linked to the overall movie theater take—a somewhat puzzling approach.[66] And there are further examples of nuanced pricing terms, including "most fa-

[63] I again caution that due to the likely selection bias underlying this collection of contracts all reported frequencies of contracting terms should be viewed as unique to this data set and not necessarily representative of broader contracting practices. See supra note 51 and accompanying text.

[64] See Outsourcing Services Agreement Between NaviSite, Inc. and ClearBlue Technologies, Inc. (Jan. 1, 2003) § 2.3, http://contracts.onecle.com/navisite/clearblue.outsource.2003.01.01.shtml (Contract 49).

[65] Technical Services Agreement Between Unisys Corp. and Tier Technologies, Inc. (July 27, 1997) Sched. A, http://contracts.onecle.com/tier/unisys.svc.1997.07.27.shtml (Contract 11). This interesting deal is notable for being a sub-outsourcing deal. That is, Unisys is outsourcing business activities to Tier in order to perform against another outsourcing contract that Unisys has signed (as vendor) for an original client.

[66] Management Services Agreement Between Cinema Properties, Inc. and Cinemark USA, Inc. (Dec. 2000) § 4.1, http://contracts.onecle.com/cinemark/cinemark-properties.svc.2000.12.shtml (Contract 26). A more logical arrangement would perhaps tie vendor compensation to the theater's profitability, as the operator's skill with respect to concessions and other cost categories fall more within their control than the decisions and marketing budgets of Hollywood film producers.

vored customer" clauses,[67] inflation adjustments,[68] and compound compensation schemes.[69]

It is worth noting, however, the comparatively infrequent use of three financial contracting strategies: Equity investment, guaranteed minimum savings clauses, and shared savings provisions. Only four of the contracts include or make reference to a governance structure where one partner agrees to take an equity stake in the other.[70] This is a major difference from some other organizational partnerships, such as technology sharing alliances, where equity sharing arrangements or joint ventures appear to be more common.[71] Then again, perhaps this aversion to equity compensation is not so surprising. Many outsourcing transactions are relatively narrow in scope, and outsourcing vendors typically serve many clients. Likewise, outsourcing clients sometimes hire multiple vendors to mitigate counterparty risk and establish ongoing benchmarks for acceptable performance levels.[72] The few exceptions seem to occur when (1) a major client "sponsors" a minor vendor, striking, in effect, a strategic partnership; or (2) a large vendor takes equity in a minor client, perhaps as a prelude to a merger.

[67] See Development, License and Hosting Agreement Between American Airlines, Inc. and Orbitz LLC (Sept. 9, 2001) § 6.7, http://contracts.onecle.com/orbitz/american.dev. 2001 .09.09.shtml (adopting a "most favored customer" clause stating that the vendor will drop prices if other clients are ever charged lower rates) (Contract 28).

[68] See Amended and Restated Global Master Services Agreement Between Coors Brewing Co. and EDS Information Services, LLC (Jan. 1, 2004) § 12.8, http://contracts.onecle.com /coors/eds.svc.2004.01.01.shtml (benchmarking fees to an inflation index) (Contract 54).

[69] See Clinical Services Master Agreement Between Cubist Pharmaceuticals, Inc. and IBAH, Inc. (Dec. 1, 1999) § 2, Exhibits A & D, http://contracts.onecle.com/cubist/ ibah.svc.1999.12.01.shtml (adopting per diem rates, a pricing cap, and pass-through procedures for certain qualified clinical expenses) (Contract 19).

[70] Form of Services Agreement Between Chipotle Mexican Grill, Inc. and McDonald's Corp. (2006) Sched. I, http://contracts.onecle.com/chipotle/mcdonalds.svc.2006.shtml (Contract 59); Master Agreement Between CenterPoint Energy, Inc. (CNP) and Artistdirect, Inc. (Aug. 14, 2001) Exhibit A, http://contracts.onecle.com/artistdirect/cnp.svc.2001.08.14.shtml (Contract 29); Master Services Agreement Between General Electric Co. and ARIS Corp., supra note 59, at Exhibit D; Call Center Service Agreement Between America's Doctor, Inc. and Medical Advisory Systems, Inc. (July 2, 1998) §§ 14–16, http://contracts.onecle.com/ digital-angel/amdoc.call.1998.07.02.shtml (Contract 13).

[71] See, e.g., Oxley, supra note 4, 388–90.

[72] This use of multiple vendors, sometimes called co-sourcing or multi-sourcing, has received support as a sensible business strategy. There are obvious tradeoffs, however, as carving up the work into smaller chunks may impose additional transaction costs and undermine the ability of a client to negotiate volume discounts. See, e.g., Geis, supra note 39, at 989–91.

More puzzling is the infrequency of contract terms that guarantee savings to a client or expressly tie vendor compensation to actual realized savings. Only one agreement in the sample adopts this sort of guarantee clause, explicitly conditioning its fees on the ability to achieve benchmark saving rates.[73] The transaction involves two sophisticated players: a leader in HR outsourcing and a major energy conglomerate. Perhaps this suggests that vendors will migrate towards these "put-your-money-where-your-mouth-is" provisions only as they gain skill in forecasting likely savings, take on the heft to diversify potential failures with other clients, and face heavy negotiating pressure from a coveted client. No contract adopts a payment strategy that explicitly divides economic savings between client and vendor—though I expect that this contracting strategy has been employed in some outsourcing transactions outside the sample.

In any case, these illustrations demonstrate that parties are using multiple approaches to divide the gains from trade. Later in this Article, I ask whether any patterns seem to arise with respect to this choice of payment structure. My goal, for now, is simply to illustrate the range of financial contracting strategies.

2. Contracting for Control

I now turn to the provisions relating to control. These terms are an obvious way for clients to directly moderate or monitor the agency cost problem, and it should not be surprising that all parties give some thought to control rights in their agreements. As before, the positive study of these features supports a hypothesis of contractual diversity, but the specific control terms can be clustered into three groups based on their frequency of use in the data set: A few terms appear often, most terms appear occasionally, and two strategies are almost never adopted, as shown in Table 3.

Three control terms are commonly used in this sample of outsourcing transactions. Most of the deals (eighty-six percent of those in the sample) impose obligations related to ongoing service level requirements, but these can range from extremely detailed bench-

[73] Framework Agreement Between BP Amoco P.L.C. and Exult, Inc. (Dec. 7, 1999) § 9 & Sched. C, http://contracts.onecle.com/exult/bpamoco.svc.1999.12.07.shtml (Contract 18).

marks that would calm the most neurotic of lawyers to lax boilerplate language offering only high level performance guidelines. The point, however, is that most parties do feel the need to define acceptable performance on an ex ante basis. Related to this, clients need some way to determine whether vendors are following through on their SLA promises. This likely explains the other two prominent control terms: vendor reporting requirements (seventy-eight percent of deals in the sample) and client monitoring rights (seventy-five percent of deals). Again, it is important to note that the specific implementation of these rights can differ considerably between transactions, as some deals call for frequent reports or inspections, while others are satisfied with less invasive monitoring.

Table 3. Overview of Control Provisions (Number of Contracts in Sample)

	Degree of Adoption		
Control Term	None	Some[74]	Strong
Service Level Agreements[75]	8	14	37
Reporting Requirements	13	12	35
Client Monitoring	15	10	35
Dedicated Facilities	28	32	-
Annual SLA Review	33	27	-
Business Process Controls	39	19	2
Third Party Monitoring	40	6	14
Manager Appointment Rights	50	8	2
Manager Termination Rights	50	9	1
Escrowing Provisions	52	8	-
Mandatory Training	56	4	-
Direct Control Carve-Outs	59	1	-

[74] The difference between the "some" and "strong" columns is based on the coding guidelines for each variable, presented infra Appendix B. For example, transactions scoring the SLA variable as one are placed in the "some" column, while those scoring this variable as two or three are placed in the "strong" column.

[75] The totals for this row do not sum to sixty because one contract makes reference to, but then excludes, information related to SLAs.

Most of the other control terms make occasional appearances in the sample, arising in a subset of transactions (anywhere from fifteen percent to fifty percent of the deals). I will not say more about the relative frequency of each control provision; Table 3 largely speaks for itself. It is, however, perhaps surprising to note that many contracts set SLAs but do not include clauses to adjust these terms for future technological change or operating improvements. Likewise, clients seem less concerned about explicitly reserving the right to bring in third party auditors to help exercise monitoring rights.

One interesting question is whether these occasional control terms appear in the same contracts or whether they arise in different agreements. In other words, do a handful of parties negotiate exhaustive control rights, or do many deals incorporate just a few provisions from the broader menu of possibilities, perhaps suggesting a substitution effect? Table 4 offers a two-by-two cross tabulation that begins to address this question. It turns out that some of the provisions do indeed arise together. The right to appoint managers, for example, is often coupled with the right to terminate managers. Likewise, almost all contracts with these manager appointment or termination clauses also delegate business process control rights to the client. Other provisions appear together less frequently, however, potentially supporting the substitution story. For example, relatively few of the third-party monitoring and escrowing clauses appear with business process control provisions, perhaps because clients pursuing the latter form of contractual protection are less concerned with the former two levers of control.

Table 4. Cross-Tabulation of Selected Control Terms (Frequency of second Term Given Appearance of First Term; Percentage of Total Term Occurrence[76])

Control Term	Annual SLA Review	Business Process Controls	Third Party Monitor	Manager Appointment	Manager Termination	Escrowing
Dedicated Facility	78%	29%	45%	20%	30%	88%
Annual SLA Review	—	29	65	40	50	75
Business Process Controls	—	—	40	90	90	25
Third Party Monitoring	—	—	—	60	60	25
Manager Appointment Rights	—	—	—	—	80	25
Manager Termination Rights	—	—	—	—	—	25
Escrowing Provisions	—	—	—	—	—	—

Finally, it is worth commenting on two control terms that did not feature prominently in the sample. Very few deals subjected a vendor to mandatory training policies established by the client. And only one contract imposed a direct control carve-out allowing the client to run part of the vendor's operations if the results began to disappoint.[77]

I was surprised that more projects did not contain explicit control carve-outs because this type of "hybrid offshoring" deal has recently been celebrated as an attractive compromise between

[76] For example, given the presence of dedicated facility provisions in the contract, twenty-one out of the twenty-seven annual SLA review clauses (or seventy-eight percent of the total) also appear in this subset of contracts.

[77] Interestingly, that deal was nothing out of the ordinary: a software development project transferring some work to an Indian programming shop.

higher cost captive offshoring (where a client establishes a fully-owned subsidiary and therefore retains control rights) and lower cost "arm's length" outsourcing (where direct control over the operations is abdicated).[78] In theory, two firms should easily be able to strike an arrangement where one party steps in, under certain conditions, to assume temporary control of assets or employees owned by the counterparty.[79] But the scarcity of direct carve-outs in this sample suggests that either conditional control procedures may prove more difficult to construct in practice than in theory, or that the deal sample fails to capture the most recent contracting practices in this area.[80]

3. Planning For Exit

The last cluster of terms relates to duration and exit. Figure 1 summarizes the duration term, which ranges from six months to ten years.[81] The mean duration is just over three years, though this is not very informative given the wide dispersion.[82] Some commentators suggest that outsourcing deals are becoming shorter,[83] but there are no obvious time trends in the data; both long and short term contracts appear throughout most years in the sample. I re-

[78] See Now for the Hard Part: A Survey of Business In India, The Economist, June 3, 2006, at 7 (discussing a hybrid arrangement where Wachovia carved out direct control rights during an outsourcing partnership with India's Genpact).

[79] Indeed, I have argued elsewhere that such an arrangement may provide a sensible economic compromise between agency cost and transaction cost pressures. See Geis, supra note 4.

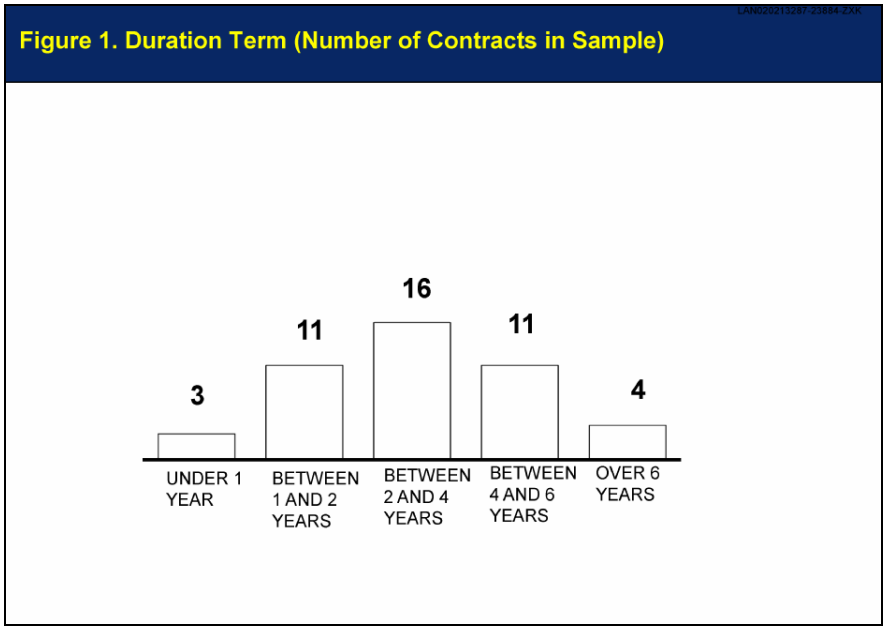
[80] I was also struck by the absence of another contracting term. With the rise of multi-sourcing transactions (where one client outsources a project to several overlapping vendors), I had heard from several deal principals that parties were starting to use third-party cooperation clauses mandating cooperation in a certain area between two vendors who were not in direct contractual privity. While I did not specify this variable in the coding template, I had hoped to uncover a few examples of these provisions. Unfortunately, very few of the transactions in the database involved multi-sourcing arrangements, and none of these contained third-party cooperation terms.

[81] Data on this variable were more difficult to obtain: Ten contracts in the sample failed to state an anticipated duration, and five contracts redacted this information.

[82] More specifically, the mean is 3.01 years, the median is two years, and the standard deviation is 2.33. As mentioned above, this calculation is based on just forty-five of the sixty transactions.

[83] E.g., Charles Forelle, IBM Turns to Smaller Service Deals, Wall St. J., Feb. 24, 2005, at A3.

turn to explore links between duration and other terms in Part IV of the Article.



Contractual duration collapses into more of a forecasting concept, however, if coupled with painless termination rights. JP Morgan Chase, for example, infamously canceled a $5 billion outsourcing project with IBM in 2004—just eighteen months into their "seven-year" contract.[84] As Table 5 reports, almost every contract in the sample includes explicit for cause termination rights, and more than half add for convenience termination. Typically the latter provisions extend only to clients and impose additional fees.

[84] Under the agreement, IBM would manage most of the bank's core technology functions, including data centers, help desks, data and voice networks, and distributed computing. David Wighton & Simon London, Bank scraps $5bn IBM IT Deal, Fin. Times, Sep. 16, 2004, at 32. IBM incurred large upfront investments to support JP Morgan's technology needs, and the partnership moved forward, but when Jamie Dimon took over the leadership of JP Morgan, his team soon decided to pull the plug on the IBM project, pointing to the high cost of the contract, the strategic importance of IT ownership, and excess technology capacity at BankOne. Id. IBM seems to have recently deemphasized an "on-demand" strategy, pushing for shorter projects that shift termination risk back to clients. See, e.g., Forelle, supra note 83.

Slightly over a third of the deals in the sample erect a framework for managing operational disputes (a joint manager review board with appeal procedures to higher officers is common), and twenty-six of the contracts include arbitration provisions.

Table 5. Exit Provisions (Number of contracts in sample)

Term	Yes	No
For Cause Termination	58	2
For Convenience Termination	44	16
Internal Dispute Governance	22	38
Arbitration Clause	26	34

In contrast to the finance and control terms, there is more uniformity among the exit provisions, but two unconventional findings deserve comment. A few contracts impose elaborate rules for calculating termination fees; for example, by incorporating the costs of a specific investment into the price of early exit and prorating this charge according to the months remaining in the initial term.[85] Such a provision should have the practical effect of shifting some investment risk from vendor to client, encouraging the latter party to internalize the costs of exit. Another interesting deal seeks to constrain the client's exit choices by negotiating for vendor exclusivity during the full term of agreement.[86] For the most part, however, duration and exit terms in the outsourcing contracts are relatively straightforward.

B. Synthesizing the Contracts into Governance Patterns

Taken together, this term analysis offers some insight into the strategies that parties are using to execute outsourcing transactions. The key takeaway should be obvious by now: There is no uniform organizational framework for conducting these projects. Rather, the contracts embrace distinct arrays of clauses and conditions to govern fundamental dimensions of the relationship.

[85] E.g., Master Agreement Between CNP, Inc. and Artistdirect, Inc., supra note 70, Exhibits B & E.

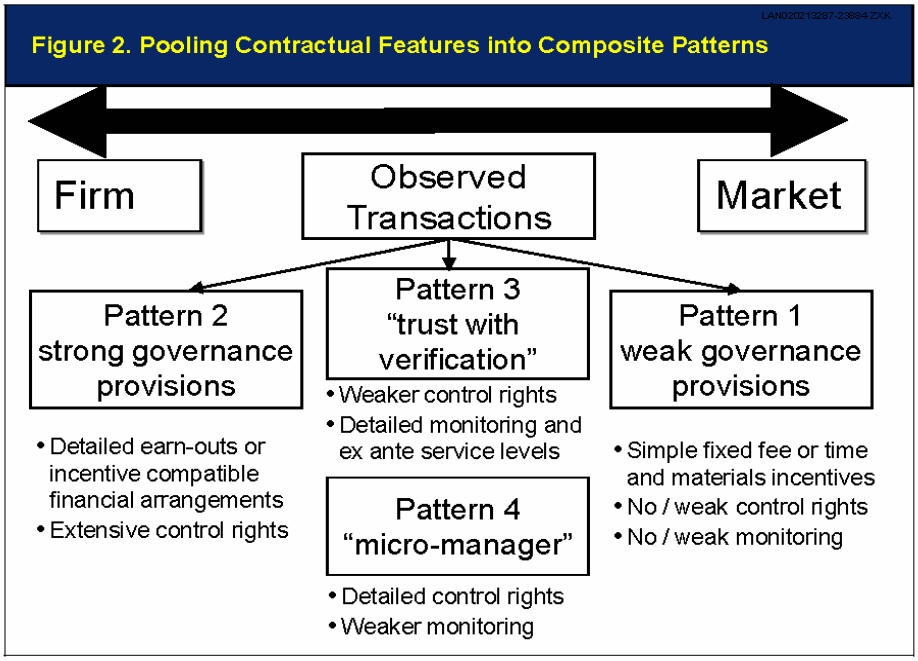
[86] Outsourcing Services Agreement Between NaviSite, Inc. and ClearBlue Technologies, Inc., supra note 64 § 1.3.

It is tempting to halt the research project here, concluding simply that the contractual cacophony resists any attempt at order and is most likely the result of idiosyncratic preferences or inherent randomness. But this is not very helpful, and I will try to press forward to make some sense of the data. Indeed, if we come back to the foundational categories of financial risk and control, it is possible to synthesize the dataset into four rough governance patterns by asking whether the parties are behaving more like independent market actors or firm-like subsidiaries across the dimensions of financial reward and control (see Figure 2).[87]

The first pattern arises when parties write "market-like" provisions to govern both financial risk and operational control. For the financial terms, this means adopting simple fixed fee or cost-plus payment schemes along with weak incentive-compatible earn-outs or penalty clauses (or none at all). For the control provisions, this means that the parties pay very little attention to service levels, monitoring rights, and process controls. In short, the firms make little formal effort to align ongoing incentives in these governance regimes; they simply trade a good or service and mind their own business.

A second pattern emerges if we turn to the other extreme, where the parties select "firm-like" provisions to govern both financial incentives and control rights. Under this paradigm, clients obtain multiple forms of control, set extensive provisions to monitor performance, and back up these rights with economic consequences for SLA lapses or payment frameworks that align incentives in some other manner. At the extreme, this governance regime approaches that of a corporate parent and subsidiary—though the parties never come close to that level of integration here.

[87] It is more difficult to draw governance conclusions from duration and exit, though I will have more to say about these terms shortly. Part of the analytical challenge arises because duration information is redacted from so many contracts in the data set. More substantively, however, short duration might be consistent with either a mindless, market-like purchase (such as buying bananas from the grocery store) or it might be part of a mindful strategy to stage commitment and mitigate agency costs.



The other patterns occur when parties adopt intermediate governance structures, using hierarchical terms for some, but not all, of the contracting categories. Here the classification grows more nuanced and impressionistic due to the varied strategies for dividing operational control. A third pattern might be called "trust with verification." It arises when a client cedes almost complete operating control over the business processes to the vendor but insists on very detailed service level provisions and monitoring rights. In other words, the client eschews fluid week-to-week control but demands very detailed ex ante rules and the ability to verify that the rules are being followed with comprehensive auditing rights or reporting requirements.

The fourth pattern is the micro-managing client. Under this paradigm, the contract vests considerable control rights with an outsourcer, typically through manager appointment and termination clauses, business process approval rights, and the use of dedicated facilities. Theoretically, this governance strategy would also embrace direct control carve-outs (though recall that this provision only appeared once in the sample). Moderate SLA or reporting re-

quirements might also be used, but the client is typically less concerned with monitoring, preferring the power to meddle with operations on a more consistent basis. An analogy can be drawn with the Wall Street officer who manages by placing his desk right in the middle of the trading floor as opposed to one who peruses consistent and detailed activity reports from a remote corner office.

These four governance patterns, then, offer a plausible basis for sorting the sample of outsourcing contracts. To be sure, the classification exercise is not an exact science. But it does seem to account for the general approach that most parties have taken in a logical and mutually exclusive manner. Furthermore, it arguably captures key strategic tradeoffs without placing too much importance on individual contracting terms—that is, it accepts that parties may contract for control or align financial incentives in multiple ways.

The next logical question is: how do parties choose among these different approaches to governance? Is this just a function of individual contracting preferences, perhaps driven by the personal priorities of the lawyers and managers drafting each transaction? Is it indeed random? Or might there be some logical link between the economic context underlying a given outsourcing project and the adoption of contracting arrangements that are more firm-like or more market-like? In other words, to what extent does the governance role performed by outsourcing contracts accord with transaction cost theories of the firm?

IV. TESTING THE LINK BETWEEN CONTRACT DESIGN AND THE ECONOMIC CONTEXT OF BUSINESS OUTSOURCING

Armed with this micro-analytical data set of outsourcing transactions, the final empirical task is to determine whether key differences in these contracts can be explained by the likely need for alternative governance regimes. This Part explores several hypotheses on this relationship between economic context and transactional form. To undertake the analysis, I must first return to two modeling challenges described earlier in the Article: (1) delineating the dependent variable; and (2) specifying the independent variables of interest, primarily proxies for the forces that theoretically affect transactional form. After discussing my approach to

both of these issues, I then run the analysis and present the results of this work.[88]

A. Delineating the Dependent Variable

The first task is to delineate the different forms of outsourcing contracts that will serve as the dependent variable. The unit of analysis is obviously the transaction. But what exactly does it mean to have a relationship that is more "firm-like" versus one that is more "market-like"? And into how many classes should this dependent variable be split? On the one hand, every contract is unique, and using broad groupings presents a risk that disparate forms of contracting will be lumped together. On the other hand, parsing the dependent variable in an extremely granular fashion may obscure meaningful results by hiding the analysis down in the weeds.

Practically speaking, these questions revisit the previous Part's efforts at contractual synthesis, and I will draw upon that analysis here. For this part of the study, however, I have elected to move from four contracting patterns to three dependent variable forms. Specifically, I merge Pattern 3 (trust with verification) with Pattern 4 (the micro-manager) into a single dependent form of "intermediate governance" because I view these two approaches as comparable contracting strategies on the market-versus-firm governance spectrum.[89] Thus, I assign each contact to one of three composite forms based on whether the intensity of governance terms (uncovered by the positive analysis conducted above) comes closer to an arms-length market transaction or a subsidiary-like hierarchical re-

[88] It is important to note one conceptual limitation of this project: The analysis excludes captive offshoring decisions. In other words, this Article studies variations in transactional form given a decision to outsource. A broader analysis, perhaps encompassing qualitative empirical case studies, would be needed to evaluate the fuller range of organizational alternatives. Nevertheless, the empirical inquiry should still offer helpful results within this narrower range of transactions.

[89] To ensure that this did not skew the results, I reran the analysis for model specifications 1 and 2 using a four-form variable where each value for the dependent variable was matched to a pattern in Figure 2. This did not change the results, especially the significance of each variable, in a meaningful manner. I then reversed the order of the two middle forms (as it is not intuitively obvious which pattern is more firm-like), and the results were again consistent with all other analyses.

lationship.[90] Each contract is therefore placed into one of the following three groups:

- FORM 0 = weak governance provisions (more "market-like" outsourcing);
- FORM 1 = intermediate governance provisions ("trust with verification" or "micro-managing" outsourcing); and
- FORM 2 = strong governance provisions (more "firm-like" outsourcing).

B. Independent Variables and Hypotheses on Outsourcing Form

After classifying each contract into a discrete transactional form, the next step is to bring relevant independent variables into the model to test links between form and context. I start by examining whether the contracting strategies follow a time trend (as suggested by some commentators) and then explore hypotheses related to transaction cost and agency cost theories of the firm.

As stated above, it is often unrealistic to directly measure the presence of hold-up or agency risk for any given transaction.[91] I, therefore take a hypothesis-driven approach, using proxy variables that arguably relate to the terms of greatest theoretical interest, including the presence of unique assets, the risk of agency abuses, future uncertainty, and so on.[92] Specifically, I draw upon the predictions of organizational economics to develop five hypotheses about outsourcing relationships.

First, we might expect that relationship-specific assets are more likely to appear with complex business function outsourcing and less likely to arise with basic functional outsourcing.[93] A modular

[90] Appendix C details the scoring methodology. Obviously, any effort along these lines requires subjective judgment. But a bottom-up aggregation of the key variables may lead to more meaningful results than a term-by-term analysis because individual terms can serve as substitutes and because there are multiple ways to meet a single goal. Examining individual provisions on a more granular basis may therefore mislead.

[91] See supra notes 26–27 and accompanying text.

[92] Such an approach is consistent with other empirical work on hybrid ventures. See Oxley, supra note 4, at 396–402. But it is certainly not the only way to proceed; other possible approaches might involve industry case studies or surveying outsourcing managers about the asset specificity or agency risks underlying their projects. This latter strategy is the one taken by Barthélemy & Quélin, supra note 42, at 1782–85.

[93] Recall that Table 1 presents summary statistics for the business functions covered by the sample.

call center or IT hosting project, for example, will usually involve assets with lower levels of relationship specificity; it is relatively easy for dissatisfied clients to switch vendors. Other outsourcing projects, such as software development or HR services, are often more intertwined with a firm's idiosyncratic operations. Some firms choose to outsource their entire HR department, for instance, hiring vendors to absorb former employees, plan and administer recruiting, training, management, and other HR functions. It is likely that these—and other deals involving more complex business functions—bring greater levels of hold-up and agency risk. Ideally, this hypothesis should be tested by assigning dummy variables to each of the fourteen business functions in the sample. Given the small sample size, however, I will mostly employ generalized analytical methods, such as combining business functions into a few tranches of complexity.[94]

The second hypothesis also relates to what is being outsourced but pursues the question from a different angle. Everything else being equal, I predict that transactions covering more than one business function will bring greater levels of agency risk, asset specificity, and complexity. For instance, a deal where the vendor assumes responsibility for HR services, procurement services, and Sarbanes Oxley compliance might be expected to raise more serious governance concerns than a project that manages only one of these functions. Eight of the contracts in the sample involve this sort of multiple function outsourcing, and I construct a variable to test whether this impacts the ultimate form of governance.

The third hypothesis explores contracting differences between onshore and offshore outsourcing. My premise is that offshore outsourcing presents higher levels of agency and hold-up risk than onshore outsourcing due to the geographic, temporal, and cultural differences, which arguably create more slack for abuse and obscure monitoring efforts. In other words, the contract to move

[94] Specifically, I have classified the business functions into three groups prior to running my analysis: (1) simple functional outsourcing, including call center, IT hosting, and maintenance; (2) intermediate functional outsourcing, including accounting, data management, IT support, manufacturing, marketing, operations management, and telecom; and (3) complex functional outsourcing, including clinical trials, distribution, HR, and software development. I do run a tentative analytical experiment, however, on the significance of individual business functions. See infra note 104.

software development to Bangalore will be governed differently than the contract to move that same project to a vendor in San Jose. By comparing the geographic location of the client firm with the vendor firm, I can construct a variable to study whether offshoring (known to occur in twelve of the transactions) influences the choice of contractual form.

The last two hypotheses, relating to contract duration and ease of exit, are more nuanced and likely to have some offsetting effects. On the one hand, because short agreements can act as a check on opportunism by allowing either party to walk away if the relationship deteriorates, some transactions may eschew firm-like governance provisions and simply use brief duration terms to stage their commitment.[95] On the other hand, it is important to consider the effect that duration has on efficient project investment: Shorter-term projects potentially undermine incentives to deploy relation-specific capital (both tangible and human), and we might expect parties to take account of this concern with incentive-compatible financial arrangements or more detailed control provisions. On balance, I will hypothesize that longer contracts bring greater levels of agency and hold-up risk by avoiding staged commitment effects and should therefore lead to more firm-like governance. My ingoing confidence in this prediction, however, is low.

Similarly, liberal for cause or for convenience exit rights grant one or both parties a put option on the project, which can be a powerful motivational force to thwart slacking, thus replacing firm-like contracting provisions. The same need for terms that encourage relation-specific investments may cut the other way, however. As a proxy for ease of exit, I construct a variable identifying the presence of both for cause and for convenience exit rights[96] and hy-

[95] This insight relates back to research on venture capital financing transactions, where scholars have shown how staged investment can mitigate agency costs. See, e.g., Paul Gompers & Josh Lerner, The Venture Capital Cycle 160 (2d ed. 2004); Michael Klausner & Kate Litvak, What Economists Have Taught Us About Venture Capital Contracting, *in* Bridging the Entrepreneurial Gap: Linking Governance with Regulatory Policy 59 (Michael Whincop ed., 2001); William A. Sahlman, The Structure and Governance of Venture Capital Organizations, 27 J. Fin. Econ. 473, 493–94 (1990).

[96] This occurs in forty-three of the transactions. Ideally, it would be better to scale an ease of exit variable according to the financial penalty that must be incurred with for convenience exit. In other words, a contract conveying for convenience exit may nevertheless prove difficult to abandon if the fee incurred represents a high percent-

pothesize (again tentatively) that transactions without these terms will adopt more hierarchical governance models.

This does not exhaust all hypotheses on transactional form, of course, and there are undoubtedly other theories worth testing.[97] It should, however, get the inquiry started on whether outsourcing governance seems related to the underlying economic context. To quickly summarize:

- Hypothesis 1: Outsourcing complex business functions brings higher levels of hold-up and agency risk and leads to more firm-like governance.
- Hypothesis 2: Outsourcing multiple functions brings higher levels of hold-up and agency risk and leads to more firm-like governance.
- Hypothesis 3: Executing cross-border transactions brings higher levels of hold-up and agency risk and leads to more firm-like governance.
- Hypothesis 4: Executing longer contracts brings higher levels of hold-up and agency risk and leads to more firm-like governance.
- Hypothesis 5: Contracts without liberal exit rights bring higher levels of hold-up and agency risk and lead to more firm-like governance.

C. Statistical Methodology

With these factors in mind, the final step is to run a model testing whether the observed differences in transactional form can be explained by the independent variables. I also include partial con-

age of the total project cost. Many of the contracts do not specify this exact strike price (or the total project budget), however, so this sort of calculation cannot be easily performed.

[97] For instance, one other hypothesis that I had hoped to test was whether transactions with multiple vendors brought lower levels of hold-up and agency risk. The analysis here is nuanced. On the one hand, working with a greater number of partners brings added complexity and may offer more room for agency distortions via information asymmetry. On the other hand, multi-sourcing can also generate external performance benchmarks through the use of redundant vendors and overlapping service areas, and these arrangements are becoming popular as a strategy for checking vendor opportunism. Regrettably, there were not enough multi-sourcing contracts in the sample to test this hypothesis.

trols for industry and transaction date.[98] The statistical methodology is an ordered probit model,[99] where the observed outsourcing form bears a relationship to the identifiable characteristics of the transaction and firms.[100] Figure 3 summarizes the model.

[98] I include partial controls for industry, reflecting the presence of a financial services or IT project (the most popular areas for deals) with a binary dummy variable.

[99] An ordered model is appropriate because the dependent variable takes on one of several discrete (and ordinal) forms. I initially selected ordered probit because the dependent variable appears to roughly conform to a normal distribution. Furthermore, there is some precedent for using this specific model in the literature. I have tested for model sensitivity by rerunning the analysis with two common alternatives, the ordered logit and Cauchit models, and found ordered probit to offer a slightly better explanatory fit.

[100] More specifically, $Z = \quad X_i + \quad _i$, where Z is the unobservable measure of the position of outsourcing transaction i in the market-firm governance continuum; X is the vector of characteristics of the transaction and participating firms; is the weight attached to each characteristic; and is the error term. Following common practice, the normalization of the variance of the error term $\quad _i$ is set to 1, and the unknown cutoff points are normalized using an identifying constraint setting μ_0 at 0.

Figure 3. Summary of Model Variables

Variable	Definition	Treatment	Predicted sign
Business Function	*Activities covered by the agreement (e.g., call center, software development, human resources)*	*0 = market-like* *1 = intermediate* *2 = firm-like*	+
Multiple Functions	*Number of outsourcing services covered by the agreement: one or multiple*	*0 = one* *1 = more than one*	+
Geographic Scope	*Geographic scope of the project: onshore outsourcing or offshore outsourcing*	*0 = onshore* *1 = offshore*	+
Duration	*Stated duration of outsourcing project*	*N = years*	+
Ease of Exit	*Presence of both for cause and for convenience exit terms*	*0 = easy exit* *1 = harder exit*	+
Control Variables			
Industry	*Primary industry of outsourcing client (selected industries only)*	*Multiple dummy variables*	*n/a*
Time Trend	*Date of agreement*	*0 = 1994*	*n/a*

The goal, then, is to estimate the beta parameters with the data to see whether the independent variables are significant and to investigate the coefficient signs. A discovery, for example, that transactions involving complex business processes use more firm-like governance provisions (everything else being equal) would lend some support to the claim that transaction cost theories of the firm can be extended into hybrid organizational contracting.

D. Results and Discussion

1. Time Trends

Before running the full model, let me make a simple observation on the relationship between the date of execution and contractual form. Some commentators suggest that outsourcing practices fol-

low a temporal pattern as firms learn from previous mistakes and adjust their contracting strategies.[101] A client may start by using its standard purchasing contract, for instance, and then swing to a painstakingly detailed outsourcing contract in response to failures arising from the first deal. These detailed contracts may, in turn, foster an atmosphere of distrust, resulting in a looser, but still customized, third generation of transactions. If this time trend exists—and if it has quickly spread into general contracting practices—then we might see a link between the date of execution and form of governance. Has there been a discernible evolution in the way that parties write their contracts in this sample?

The short answer is no, but with one small caveat. As Table 6 illustrates, the contract forms span all time periods with no real evolution or obvious contracting preferences during different years.[102] This is probably a function of the data. In order for the learned preferences story to apply, there would either need to be repeat players contracting over multiple years or immediate diffusion of best practices throughout the outsourcing community. In fact, there are several transactions where the same party contracts during different years, but there is too much noise and experiential difference to support the evolution story. Furthermore, I am skeptical that just one form of contracting can be attributed to all outsourcing projects.

Table 6. Contract Form by Date of Execution (Number of Contracts)

Date of Execution	Form = 0	Form = 1	Form = 2
1994	2	1	-
1995	-	1	-
1996	-	-	-
1997	1	6	-
1998	2	3	-
1999	1	3	3

[101] See, e.g., Barthélemy, supra note 42.

[102] The insignificance of the time trend control variable in the full model, shown below in Table 7, also supports this statement. Again, due to potential selection concerns, it is important to limit any conclusions to the sample data only.

2000	-	2	2
2001	1	7	-
2002	6	2	2
2003	1	4	2
2004	-	3	1
2005	-	-	1
2006	-	1	1
2007	1	-	-
TOTAL	15	33	12

It is worth noting one small caveat observable in Table 6. For the first five years of the sample, no transaction is structured as a Form 2, hierarchical contract. It is dangerous to draw conclusions from this fact, but perhaps it lends very weak support to a claim that outsourcing contracts have evolved over this time period from standard purchase orders to more customized and complex legal relationships.

2. Transaction Cost Theory

Let me now turn to the full model and the predictions of organizational theory. Table 7 displays the estimation results, which support some—but not all—of the five transaction cost hypotheses. Specification 1 runs the analysis without the duration variable, which I initially exclude due to a lack of data on this variable. Specification 2 subtracts the geographic scope variable, which proves insignificant in Specification 1 and also suffers from data constraints. Specification 3 returns all of the variables to the model, but regrettably this reduces the number of full observations to thirty-five contracts due to combined data limitations.[103] For this reason, I concentrate most of the discussion on the first two specifications.

The results most strongly support an inference that transactional business function is a meaningful predictor of governance form. The variable for simple functional outsourcing is highly significant across the first two specifications, with a negative coefficient. The

[103] I also ran a specification that included duration and excluded geographic scope, but the results were comparable to Specification 3.

secondary variable for function is less significant, but might be included for combined effects. Thus, as hypothesized, firms pursuing simple outsourcing functions such as IT hosting or call center work do seem to choose less hierarchical contracts.[104]

The second hypothesis receives no support in the data. The multiple function variable is insignificant across all model specifications, and the coefficient sign is not stable. Accordingly, a decision to outsource more than one function in a single contract does not seem to have bearing on the choice of governance form. One possible explanation for this is that parties do not distinguish between contracts that govern several activities within one business function (for example, an HR deal for training and recruiting services) and contracts that govern multiple functions (for example, a contract for HR and accounting services). Said differently, this finding may be more the result of coding decisions instead of underlying economic differences between transactions.

Table 7. Ordered Probit Estimation Results

	1	2	3
Threshold			
[Form = 0]	-2.224** (1.04)	-2.086** (0.908)	-1.168 (1.30)
[Form = 1]	-0.367 (0.993)	-0.060 (0.868)	1.133 (1.298)
Location			
[Function = 0]	-1.399*** (0.493)	-1.471*** (0.448)	-0.814 (0.623)
[Function = 1]	-0.583 (.474)	-0.394 (0.405)	-0.076 (0.631)
Multiple Function	-0.351 (0.544)	0.048 (0.464)	-0.665 (0.591)
Geographic Scope	-0.299		0.296

[104] As an experiment, I decided to rerun the model looking exclusively at the connections between form and function with dummy variables for each of the fourteen business functions. This simplified model offered a reasonable fit to the data (two of the Pseudo R-Square indicators exceeded 0.5) and four of the variables were significant at the ninety percent level (IT hosting, IT support, Maintenance, and Manufacturing).

	(0.465)		(0.565)
Duration			0.264** (0.118)
Ease of Exit	-0.640 (0.455)	-0.914** (0.401)	-0.106 (0.567)
Industry: Finance	-0.534 (0.516)	-0.661 (0.448)	0.014 (0.668)
Industry: IT	-0.253 (0.628)	-0.532 (0.512)	-0.143 (0.774)
Time Trend	0.86 (0.064)	.089 (0.454)	0.008 (0.082)
Fit Measures			
Pseudo R-Square: Cox and Snell	0.340	0.338	0.324
Pseudo R-Square: Nagelkerke	0.390	0.391	0.383
Pseudo R-Square: McFadden	0.202	0.207	0.209
Sample Size (n)	47	60	35
* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$; standard errors in parentheses			

Likewise, geographic scope seems useless as a predictor of contracting form; the variable is highly insignificant. This is interesting and more surprising to me because the conventional wisdom states that parties need to plan their affairs more carefully when structuring offshore deals. The findings here suggest a different result: that the onshore-offshore distinction is not very indicative of contractual form.[105]

The hypotheses on duration and exit rights are more difficult to interpret. The lack of data on duration is especially problematic. Specification 3 suggests that duration may indeed be a significant predictor of form, but I view this result with skepticism due to the truncated sample size. Exit rights, on the other hand, are almost significant in Specification 1[106] and statistically significant in Specification 2 (where the full sample is considered). The coefficient is negative in both cases, offering loose evidence that easier exit may correlate with more market-like contracts. (Recall that a 0 indicator is used for more liberal exit terms.) In other words, parties with

[105] This conclusion should be qualified, however, by the fact that only twelve transactions involve offshoring.

[106] The *p* value is 0.159.

the freedom to walk away from an outsourcing deal may worry less about writing upfront hierarchical governance terms.

Finally, it is interesting to note that none of the control variables are significant. This is consistent with some of the literature on hybrid organizational contracting,[107] and it suggests that transactional context may be more important than firm context when determining outsourcing governance. The insignificance of the time trend variable also supports the earlier statement that contractual form has not followed an evolutionary path towards some Goldilocks model of governance.[108]

In summary, this model provides the strongest support for Hypothesis 1 (business function) and moderate support for Hypothesis 5 (exit rights). Hypotheses 2 (multiple functions) and 3 (offshoring) receive no support from the data, and it is difficult to support or refute Hypothesis 4 (duration).

CONCLUSION

Transaction cost theories of the firm have received abundant support over the past few decades. But managers enjoy a variety of intermediate options for structuring "make or buy" decisions, and it is unknown whether the critical concerns of hold-up and agency risk also play a meaningful role in hybrid forms of organizational contracting. More basically, we have very little data on the specific terms that parties are using to govern these complex transactions. This Article has offered an empirical study of hybrid contracting, focusing on the organizational construct of business outsourcing.

More specifically, I have conducted a micro-analytical examination of sixty onshore and offshore outsourcing transactions in pursuit of two foundational questions: (1) how do parties write these deals; and (2) why do we observe major differences in governance terms? The positive analysis suggests that outsourcing transactions are extremely diverse; clients and vendors adopt many strategies to divide financial gains, allocate control, determine monitoring rights, set exit terms, and parse operational risk. Yet taken together, these assorted terms arguably allow parties to structure several ordinal relationships on the market-hierarchy continuum.

[107] See, e.g., Oxley, supra note 4, at 405.
[108] See supra Subsection IV.D.1.

It is more difficult to draw solid conclusions for the second question: the extent to which outsourcing contracts adhere to predictions of transaction cost economics. There is modest evidence that parties write contracts with more hierarchical governance features when a deal involves complex business functions or imposes stricter barriers to exit. The data set is limited, however, and several other hypotheses are unsupported by the analysis. Transaction cost economics may indeed prove to be the fundamental force driving the contracting strategies of outsourcing and other hybrid production relationships. This project saunters a few steps in that direction, but more work is needed on the matter.

APPENDIX A. SCHEDULE OF CONTRACTS IN DATABASE

#	Client Firm	Vendor Firm	Year
1	American Tissue, Corp.	American Tissue de Mexico, S.A. de C.V.	1994
2	Intelligent Systems for Retail, Inc.	Exodus Communications, Inc.	1994
3	Wired Ventures, Ltd.	Neodata Services, Inc.	1994
4	Unisys Corp.	Tier Corp.	1995
5	Atlanta Internet Bank	CheckFree Corp.	1997
6	Internet Access Financial Corp. ("IAFC")	Exodus Communications, Inc. ("Exodus")	1997
7	SmithKline Beecham Laboratories, Inc.	Actamed Corp.	1997
8	NationsBanc Services, Inc.	Network Services, Inc	1997
9	Colorado Satellite Broadcasting, Inc.	1248663 ONTARIO INC.	1997
10	Kaiser Family Foundation	Tier Technologies, Inc.	1997
11	Unisys Corp.	Tier Technologies, Inc.[109]	1997
12	Clarent Corp.	Equant Integration Services, Inc.	1998

[109] This contract is related to Contract 4, though the vendor apparently changed names. The nature of the agreements differ, however, as the earlier contract related more to project scoping services.

13	America's Doctor, Inc.	Medical Advisory Systems, Inc. ("MAS")	1998
14	911 gifts, Inc.	Exodus	1998
15	Avenue A, Inc.	Exodus	1998
16	Juno Online Services, Inc.	Softbank Corp.	1998
17	Allstate Insurance Co.	Acxiom Corp.	1999
18	BP Amoco P.L.C.	Exult, Inc.	1999
19	Cubist Pharmaceuticals, Inc. ("Cubist")	IBAH, Inc.	1999
20	Efox.net, Inc.	Frontier GlobalCenter, Inc.	1999
21	Digital Insight Corp.	Exodus	1999
22	Handspring, Inc.	Flextronics International Ltd.	1999
23	Beech Street Corp.	Healtheon Corp.	1999
24	General Electric Co.	ARIS Corp.	2000
25	Bank of America Corp.	Exult, Inc.	2000
26	Cinema Properties, Inc.	Cinemark USA, Inc.	2000
27	Unisys Corp.	Exult, Inc.	2000
28	American Airlines, Inc.	Orbitz LLC	2001
29	Artistdirect, Inc.	CenterPoint Energy, Inc. ("CNP")	2001
30	Cubist	Quintiles Transactional Corp.	2001
31	International Paper Co.	Exult, Inc.	2001
32	InPhonic, Inc.	Appiant Technologies, Inc.	2001
33	Morgan Stanley Dean Witter & Co.	International Business Machines Corp. ("IBM")	2001
34	JetBlue Airways Corp.	EADS Aeroframe Services, LLC	2001
35	SunnComm, Inc.	BTEK Software, Inc.	2001
36	Align Technology, Inc.	Invisible IT, Inc.	2002
37	Portal Software, Inc.	APAR Infotech Corp.	2002
38	Bluefly, Inc.	IBM	2002
39	CancerVax Corp.	Synteract, Inc.	2002
40	IBM	Equinix, Inc.	2002
41	Prudential Insurance Company of America	Exult, Inc.	2002
42	Handspring, Inc.	Solectron Corp.	2002

43	uDate.com, Inc.	IBM	2002
44	SAVVIS Communications Corp.	Level 3 Communications, Inc.	2002
45	Salesforce.com, Inc.	Qwest Communications Corp.	2002
46	Bank of Montreal	Exult, Inc.	2003
47	Bayerische Motoren Werke A.G. ("BMW")	Vodafone Passo GmbH	2003
48	Cardtronics, LP	EFMARK Service Co. of Illinois ("ESC")	2003
49	ClearBlue Technologies, Inc.	NaviSite, Inc.	2003
50	Egenera, Inc.	Unisys Corp.	2003
51	Sovereign Bank	Intercept Inc.	2003
52	Vascular Sciences	Promedica International	2003
53	A.G. Edwards, Inc.	Kanbay International, Inc.	2004
54	Coors Brewing Co.	EDS Information Services, LLC	2004
55	Vonage Holdings Corp.	Level 3 Communications, LLC	2004
56	SmartBargains.com, LP	UPS Supply Chain Solutions, Inc.	2004
57	Vonage Network Inc.	Syncronoss Technologies, Inc.	2005
58	New Century Financial Corp.	Accenture LLP	2006
59	Chipotle Mexican Grill, Inc.	McDonald's Corp.	2006
60	Rackspace Hosting, Inc.	Interconnect Exchange Europe, Ltd. ("IX Europe")	2007

APPENDIX B. BLANK CODING TEMPLATE

Variable	Field	Description	Code (if applicable)
Descriptive Features			
ID	Numeri-cal	Transaction Number for Control Purposes	
Client	Text	Name of Outsourc-ing Client Firm	
Vendor	Text	Name of Outsourc-ing Vendor Firm	
Start Date	Numeri-cal	Year Contract is Signed	
Function1	Text	Activity Covered by Agreement	
Function2	Text	Activity Covered by Agreement	
Function3	Text	Activity Covered by Agreement	
Industry	Text	Client Industry	
Client Lo-cation	Text	Primary Country of Client	
Vendor Lo-cation	Text	Primary Country of Vendor (where work will be performed)	
Other Ven-dors	Binary	Are there multiple vendors involved?	0 = no 1 = yes
Incentive Terms			
Pricing Structure	Numeri-cal	How is pricing de-termined?	0 = flat fee 1 = cost plus 2 = fixed min plus variable volume payment 3 = guaranteed minimum savings

Earn-Out	Binary	Are vendor earn-out rights included?	0 = no 1 = yes
Equity Sharing	Binary	Does vendor take a stake in client's equity?	0 = no 1 = yes
Other Incentives	Numerical	Are there other financial incentive terms (e.g., penalty for SLA failure)?	0 = no 1 = a few 2 = substantial
Control Terms			
Manager Appointment Rights	Numerical	Can client appoint vendor's project managers?	0 = no 1 = a few 2 = many
Manager Termination Rights	Numerical	Can client fire vendor's project managers?	0 = no 1 = with cause 2 = at will
Business Process Control Rights	Numerical	Is client authorized to set and alter business processes?	0 = no 1 = occasionally/ with key processes 2 = extensively
Mandatory Training Procedures	Binary	Must vendor employees follow client-determined training?	0 = no 1 = yes
Direct Control Carve-Outs	Numerical	Is client authorized to take direct control over business processes?	0 = no 1 = occasionally/ with performance triggers 2 = at will
Dedicated Facility	Binary	Is client guaranteed dedicated facility?	0 = no 1 = yes
Service Level Commitments	Numerical	How extensive are SLA requirements?	0 = no SLAs 1 = few SLAs 2 = moderate SLAs covering a fair amount of activity 3 = very detailed SLAs

Annual SLA Review	Binary	Do parties review/ revise the SLAs?	0 = no 1 = yes
Client Monitoring Rights	Numerical	How extensive are client monitoring rights?	0 = none 1 = few high level controls 2 = moderate monitoring controls 3 = detailed monitoring provisions
Third Party Monitoring	Binary	Are there third party monitoring provisions?	0 = no 1 = contract references third party standards 2 = contract provides for third party audits/ monitoring
Reporting Requirements	Numerical	How extensive are vendor reporting requirements?	0 = none 1 = high level/annual reports 2 = detailed/frequent reports
Duration Terms			
Length	Numerical	Number of Years Contract is Expected to Last	
For Cause Exit	Binary	Are there for cause exit provisions?	0 = no 1 = yes
For Convenience Exit	Binary	Are there for convenience exit provisions?	0 = no 1 = yes
Escrowing Provisions	Binary	Are there escrow provisions to protect exit rights?	0 = no 1 = yes
Internal Dispute Governance	Numerical	Are there terms to solve disputes via internal governance?	0 = none 1 = only related to termination 2 = for many disputes

Arbitration	Binary	Is the contract governed by arbitration?	0 = no 1 = yes

APPENDIX C. DEPENDENT VARIABLE SCORING METHODOLOGY

Each transaction is classified into one of four patterns and one of three dependent variable forms according to the governance terms selected for financial incentives and control rights. As described in the main text, I combine two patterns into a single dependent variable form. This Appendix describes the specific scoring methodology used to make these distinctions.

Starting with the financial incentive axis, I sort each contract into two groups: (1) those with more incentive compatible (or hierarchical) governance terms; and (2) those with more market-like terms. Contracts with explicit earn-out features or equity sharing arrangements are immediately classified as type 1. I also place transactions with substantial other financial incentive terms (coded 2 for this variable in the Appendix B form) into group 1. Finally, I examine the overall pricing strategy (the first financial variable in the coding form). I place contracts with guaranteed minimum savings schemes (coded 3 in the form) into group 1, along with two transactions that defy common payment clauses (specifically, contracts 20 and 23—which incorporate revenue sharing or other, intricately braided payment schemes). I place contracts without any of these financial features into group 2 (market-like financial incentives)—no matter whether the payment structure is fixed fee, cost-plus, or some combination of the two.

The next step is to score each contract according to its control provisions. I sum the total coding score for all variables in this group (from manager appointment rights to reporting requirements in the coding template; I also include the escrowing variable), resulting in a composite rating from 0 to 15. Transactions with a composite of 10 or more are treated as extremely hierarchical governance contracts on the control dimension; those with a score of 6 to 9 are intermediate; and those with a score of 5 or lower are treated as market-like. The intermediate contracts are subjected to further analysis for Part III of the Article, which explores whether these partial control features relate more to trust with verification or hands-on management. In Part IV of the Arti-

cle, however, these two patterns are viewed as substitutes and not analyzed separately.

Putting together these two dimensions of financial risk and control results in a two-by-three matrix of outcomes and leads to the final assignment of each transaction to a dependent variable form (see Figure 4). I classify contracts that are hierarchical on both dimensions as form 2. I also place contracts into form 2 if they have hierarchical financial terms and intermediate control terms (under an assumption that these deals still provide intense governance incentives). Conversely, I classify contracts that are market-like on both dimensions as form 0. The remaining transactions comprise form 1.