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Outsourcing, Modularity, and the Theory of the Firm

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Outsourcing, Modularity, and the Theory of the Firm

Margaret M. Blair, Erin O'Hara O'Connor, and Gregg Kirchhoefer*

ABSTRACT

Firms have increasingly moved productive activities from within to outside the firm through outsourcing arrangements. According to some estimates, the value of outsourcing contracts has been nearly 100 billion dollars per year since 2004. Firm outsourcing happens for a number of reasons, including to save labor costs, capture the benefits of regulatory arbitrage, and take advantage of economies of scale in the provision of firm needs. We review a number of outsourcing contracts for evidence that contract techniques are used to help modularize the relationship between the firm and its service provider. Consistent with what modularity theory might predict, some contract terms seem to work to thin the interactions between the firm and its service provider, and this thinning serves to make contracting for otherwise intrafirm services more feasible. Other contract terms serve to help the parties manage the fact that inevitably their relationship will be thick with interactions.

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TABLE OF CONTENTS

I. INTRODUCTION	265
II. HIERARCHY AND MODULARITY IN THE THEORY OF THE FIRM	269
A. <i>The Role of Hierarchy</i>	273
B. <i>Knowledge, Transfers, and Interdependence of Production</i>	276
1. <i>The role of knowledge in theories of the firm</i>	277
2. <i>Interconnectedness vs. decomposability</i>	279
3. <i>The role of “complex, interdependent, and iterative transfers”</i>	282
4. <i>Implications for outsourcing contracts</i>	287
III. OUTSOURCING CONTRACTS AND THEIR ROLE IN CROSSING-POINT MANAGEMENT	289
A. <i>Our Contracts</i>	289
B. <i>Thick and Thin Crossing Points</i>	290
1. <i>Creating thin crossing points</i>	290
a. <i>“Master Agreement” plus “Statement of Work” structure</i>	291
b. <i>Identifying a small number of key personnel as decision-makers</i>	292
2. <i>Specification or standardization of terms and procedures</i>	293
a. <i>Invoking or developing standardized metrics</i>	294
b. <i>Codification of processes</i>	295
c. <i>Periodic (rather than continuous) evaluation of performance against standards</i>	297
3. <i>Management of thick crossing points</i>	298
a. <i>Customer control over Service Provider personnel</i>	299
b. <i>Termination provisions</i>	300
IV. OBSERVATIONS AND COMPARISONS	301
A. <i>Outsourcing Contracts and Transactions Costs</i>	301
B. <i>Generalizing Crossing-Point Management in Outsourcing</i>	303
C. <i>Litigation over Outsourcing Contracts</i>	308
V. CONCLUSION.....	310

I. INTRODUCTION

In recent years the practice of “outsourcing” and “offshoring” of production and services by firms in a wide range of industries has become quite common.¹ This represents a change in the organization of production in many firms, from inside to outside the firm. As such, it challenges theorists in management, economics, and the law to rethink some of the accepted explanations that theorists have offered about the boundaries of the firm. Why is it that some productive activity is organized entirely within the boundaries of individual firms, while other activities are organized through contracts, either via arms-length market exchanges or by longer-term formal contracts?

Theories that attempt to explain why business organizers choose one structure rather than another—governance by contractual agreement, for example, rather than governance within a firm—are called “theories of the firm.” Among the most well-accepted ideas in the “theory of the firm” literature is that productive activities will tend to be carried out within a single firm, governed by hierarchical decision-making, when the “transactions costs” associated with using markets or contracts are higher than the costs of using internal hierarchy.² If this is correct, then the widespread shift among

1. Data collected by a private firm, Technology Partners International, Inc., indicate that the “total contract value” of outsourcing contracts that exceeded \$25 million in value reached a peak of \$96.8 billion worldwide in 2004, and ranged from about \$85 billion to \$97 billion from 2004 through 2008. Total contract value was substantially smaller in the first half of 2009 as the world was gripped by an unusually bad recession. TECH. PARTNERS INT’L, INC., THE TPI INDEX: AN INFORMED VIEW OF THE STATE OF THE GLOBAL COMMERCIAL OUTSOURCING MARKET SECOND QUARTER AND FIRST HALF 2009 6 (2009), http://www.tpi.net/pdf/index/2Q09_TPI_Index_Presentation.pdf (last visited Mar. 25, 2011). It is too early to tell whether the fall off in outsourcing activity in 2009 is temporary and will resume when business activity in general increases, but there are reasons to believe that the global credit crisis of 2008–09 exposed vulnerabilities in outsourcing “supply chains” that may make the strategy less attractive to many firms. See generally VINAY COUTO ET AL., OFFSHORING RESEARCH NETWORK, THE GLOBALIZATION OF WHITE-COLLAR WORK: THE FACTS AND FALLOUT OF NEXT-GENERATION OFFSHORING, <http://www.booz.com/media/uploads/TheGlobalizationofWhite-CollarWork.pdf> (last visited Mar. 25, 2011); MARI SAKO, SAID BUSINESS SCHOOL, OXFORD UNIVERSITY, OUTSOURCING AND OFFSHORING: KEY TRENDS AND ISSUES (2005) (discussing outsourcing and offshoring practices by international business organization).

2. The literature on transactions cost theories of the firm began with Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937). Oliver E. Williamson developed the idea in OLIVER WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975), and transactions cost approaches to understanding organizational design have been a repeated theme in Williamson’s work.

multinational companies toward outsourcing—in which production activities that had previously been carried out within vertically integrated firms are arranged through one or more contracts across “supply chains” of different firms—suggests that either the cost of contracting has fallen in a variety of settings, or the cost of internal governance has risen (or both).

Yet we understand little about what has happened to change the relative costs of contracting and internal governance. Some observers have off-handedly noted that transportation and communications costs have declined dramatically with the advent of the Internet,³ but it is not obvious that declines in the cost of these inputs have been greater for travel and communication across firm boundaries than they have for travel and exchanges among participants within the same firm.

Another common explanation for increased outsourcing is that outsourcing makes it possible for western companies to take advantage of lower-cost labor in Asia, Latin America, and Eastern Europe.⁴ But here again, a firm need not outsource to take advantage of cheaper labor; it can often lower its labor costs simply by relocating its own operations to where the labor is cheaper.⁵

In fact, outsourcing to service providers in low wage countries might entail substantial increases in writing and enforcing contracts

3. See, e.g., Pete Engardio et. al., *The Future of Outsourcing: How It's Transforming Whole Industries and Changing the Way We Work*, BUSINESS WEEK, Jan. 30, 2006, available at http://www.businessweek.com/print/magazine/content/06_05/b3969401.htm?chan=gl (providing numerous examples of firms outsourcing engineering and design, customer service, software development, finance and accounting, human resources management, and other information-intensive work to other firms, both in the U.S. and abroad, while managing the work flow on new “IT” (information technology) platforms created for the activities). See also Manuel Gonzalez-Diaz & Luis Vazquez, *Make-or-Buy Decisions: A New Institutional Economics Approach*, in NEW INSTITUTIONAL ECONOMICS: A GUIDEBOOK 255, 256 (Eric Brousseau & Jean-Michel Glachant eds., 1990) (“[I]mprovements in information and communications technologies make it easier to identify potential partners and to communicate with them.”); Charles Perrow, *Modeling Firms in the Global Economy*, 38 THEORY & SOC’Y 217, 217 (2009) (explaining deverticalization of firms as due in part to “cheap and rapid transport”).

4. Engardio, *supra* note 3, at 3 (“The prime motive of most corporate bean counters jumping on the offshoring bandwagon has been to take advantage of . . . ‘labor arbitrage’—the huge wage gap between industrialized and developing nations.”).

5. See IBM CO., 2008 ANNUAL REPORT 53 (2008). While numerous corporations have outsourced information technology services and business processes to firms in India such as Wipro and Infosys, for example, IBM has developed a wholly owned subsidiary, IBM India. As of 2008, IBM had almost as many employees in Brazil, Russia, India, and China (113,000) as it had in the U.S. (115,000). *Id.*

given that, in many cases, rule of law institutions in these countries are significantly weaker than those in the United States.⁶ Thus, it is not obvious to us that either lower transportation and communications costs, or lower labor costs in developing countries, would by themselves necessarily encourage outsourcing to offshore companies.⁷

We do not here offer a completely satisfactory answer to the puzzle of the recent growth in outsourcing, but we believe that outsourcing contracts can help to inform both the “why” and the “how” of business arrangements moved outside the firm. Put differently, we believe that the parties’ contracting arrangements could reveal something about any such new contracting mechanisms tailored to outsourcing, and help us understand the residual concerns of the firms involved.

Thus, we examine the structure and content of a small number of contracts that corporations have entered into to govern outsourcing relationships. Such contracts constitute written evidence of an effort by the outsourcing or “customer” firm to separate out production activities along new lines, or in some new dimension, so that an outside firm can perform those activities. If the activities were previously performed in-house, what are the problems associated with separating them out that the customer and supplier firms must anticipate and provide for in the contracts? What are the new governance arrangements that the parties hope will enable them to carry out the work successfully across firm boundaries? And how are these arrangements expected to work?

Specifically, we examine seven outsourcing contracts and some associated documents provided to us by Kirkland & Ellis LLP’s Chicago office, which has a sizeable practice in the negotiation and drafting of outsourcing contracts. Each contract provided to us was

6. James Anderson & Douglas Marcouiller, *Insecurity and the Pattern of Trade: An Empirical Investigation*, 84 REV. ECON. & STAT. 342 (2002) (estimating that insecurity associated both with contractual enforcement problems and with corruption increase trade costs by about 16 percent, and thereby reduce trade); *See also* James E. Anderson & Eric van Wincoop, *Trade Costs*, 42 J. ECON. LIT. 691 (2004) (discussing factors that affect the cost of international trade).

7. Anderson & van Wincoop, *supra* note 6, at 721 (“[I]nternal contracting costs within a firm are much lower than external contracting costs. Specifically, the tax equivalent of the trading costs of a foreign affiliate of a U.S. multinational with unaffiliated U.S. firms is on average 37 percent higher . . . than the trading costs with its U.S. parent.”).

redacted to conceal the identities of the parties,⁸ and each involves a U.S.-based corporation arranging to have a substantial activity such as business services, data management, or manufacturing performed outside the United States by another firm. In each case, employees within the outsourcing firm previously had performed the activities. And in each case, the contracts were intended to govern a relationship that the parties expected to last for a substantial number of years.

We evaluate provisions of these contracts through the lens of a theory of production in firms articulated recently by Harvard Business School Professor Carliss Baldwin.⁹ Professor Baldwin builds on the notion of “modularity” in production—which is a way of thinking about the degree to which activities at one stage of production are interconnected with, and dependent upon, activities at other stages—to develop a theory to explain where we should expect to find activities carried out within the same firm, rather than across boundaries between firms. We believe modularity theory helps to illuminate how contract structure and terms help both to facilitate and to manage the outsourcing relationship. This framework also suggests where contracting party tensions may arise in the new business arrangements.

In Part II, we briefly review the theory-of-the-firm literature and explain the concept of modularity as it applies to this literature. Then we consider how modularization of a production process might make it easier to govern the process by contract rather than by internal hierarchy, and what characteristics of a production process help to make it modular. We further suggest that the contracts themselves may help to modularize production—indeed, that sufficiently sophisticated contracts may help to offset or overcome interconnectedness that arises from purely physical production attributes.

In Part III, we describe some of the relevant terms of seven outsourcing contracts. We also describe how various features of these

8. One of the authors (Kirchhoefer), of course, knows who the counterparties involved in each contract are, and provided general descriptions of the counterparties. These descriptions are reported in the Appendix.

9. See Carliss Y. Baldwin, *Where Do Transactions Come From? Modularity, Transactions, and the Boundaries of Firms*, 17 *INDUS. & CORP. CHANGE* 155 (2007) (discussing the origins of the idea of modularity in organizational design). Professor Baldwin is a leading contributor to the theory of modularity in firm organization.

contracts appear to us to be designed to help “modularize” aspects of production, so that they can more easily be governed across firms rather than by fiat within a single firm.

In Part IV, we offer some tentative observations about how these contractual governance arrangements help to reduce the transactions costs of outsourcing relative to hierarchical governance. We also compare our seven contracts to a larger sample of outsourcing contracts assembled by Professor George Geis¹⁰ to see whether the clauses that we believe help facilitate these outsourcing arrangements are also found in the contracts Geis studied. And we compare our contracts and observations based on them to an extensive analysis of three contracts studied by Professors Ronald Gilson, Charles Sabel, and Robert Scott.¹¹

In addition, we briefly discuss a few outsourcing relationship disputes that have resulted in litigation for insight into unresolved problems that some novel contract provisions might present.

We conclude with the observation that outsourcing contracts offer a potentially productive source of insights into the theory of the firm, especially theories about the location of the boundaries of firms. They also provide insight into the economy-wide factors that have been driving outsourcing, and into the effects of outsourcing over time on the firms and industries that reorganize in this way.

II. HIERARCHY AND MODULARITY IN THE THEORY OF THE FIRM

Although economists have been studying the theory of the firm for nearly a century,¹² neither theorists nor empirical researchers have

10. The Geis contracts were assembled to study the extent to which outsourcing contract terms are used to attempt to mitigate hold up and agency costs. A discussion of the contracts and the study can be found in George S. Geis, *An Empirical Examination of Business Outsourcing Transactions*, 96 VA. L. REV. 241 (2010) [hereinafter *Outsourcing Transactions*]. Geis focuses on how the contracts manage “agency costs”—the costs associated with controlling opportunism between the contracting parties—a subject he explores in an earlier article. George S. Geis, *The Space Between Markets and Hierarchies*, 95 VA. L. REV. 99, 110 (2009).

11. Ronald J. Gilson et al., *Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration*, 109 COLUM. L. REV. 431 (2009) (focusing on how the contracting parties manage innovation).

12. In 1921, Frank H. Knight laid the theoretical groundwork for much of the theory of the firm in RISK, UNCERTAINTY, & PROFIT (1921), which was based on his dissertation, *A Theory of Business Profit*, completed in 1916 at Cornell University. Frank Knight, WIKIPEDIA, http://en.wikipedia.org/wiki/Frank_Knight (last visited Mar. 25, 2011). Coase, *supra* note 2, is generally regarded as the first essay to directly pose the question of why some productive

reached agreement about the primary factors that cause business organizers to buy some inputs in spot markets, while forming long-term contracts for other inputs, and generating still other inputs from within their firm. Most economists agree with Coase that the choice of whether to “make” or “buy” an input probably has something to do with the relative transactions costs associated with each approach.¹³ But they disagree over what factors cause transactions costs to be higher in markets than in internal production (or vice versa).

Some economists essentially assume away the question by regarding the governance of relationships within a firm as no different from governing relationships by contract—a firm is just a “nexus” of contracts, they say.¹⁴ Others stress that the important difference between within-firm governance and contractual governance has to do with differences in the incentives created by these two forms. In particular, they argue that relationships governed through markets and contracts generally involve more “high-powered” incentives for the parties to maximize the productivity and profitability of each step in the productive process.¹⁵ Under some

activity is carried out in markets while other productive activity takes place within firms, where market signals are suppressed in favor of “the entrepreneur-co-ordinator, who directs production.” *Id.* at 388.

13. *Id.*

14. See Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972) (emphasizing the contractual nature (voluntary exchange) of the relationships of participants in a firm and rejecting the idea that the defining feature of a firm is the authority of the “entrepreneur-co-ordinator”). In fact, the authors assert that there is nothing special about the relationship between the managers and employees of a firm that in any way gives managers more “control,” going so far as to assert that the manager no more controls an employee than a customer controls the grocer from whom she buys bread or tuna fish. *Id.* at 777. See also Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 310 (1976) (arguing that “contractual relations are the essence of a firm,” and that a firm is a “nexus for a set of contracting relationship among individuals”) (emphasis omitted). Jensen and Meckling emphasize the “agency problem” in the governance of contractual relationships, in which one party (the agent) acts on behalf of the other party (the principal), and the problem is how to get the agent to faithfully attempt to serve the interests of the principal. *Id.* Frank H. Easterbrook & Daniel R. Fischel, *The Corporate Contract*, 89 COLUM. L. REV. 1416, 1426–28 (1989), introduced the “nexus of contracts” idea, with focus on the agency problem, to corporate law, where it continues to be highly influential.

15. Bengt Holmstrom & Paul Milgrom, *The Firm as an Incentive System*, 84 AM. ECON. REV. 972 (1994), were among the first scholars to use the phrases “high-powered incentive systems” and “low-powered incentive systems” in describing the role of incentives in within-firm management. See also Todd R. Zenger & William S. Hesterly, *The Disaggregation of Corporations: Selective Intervention, High-Powered Incentives, and Molecular Units*, 8 ORG. SCI.

conditions, high-powered incentives may lead to greater overall efficiencies. But where the steps in the production process, or in different aspects of the enterprise, are interdependent, high-powered incentives can lead parties to engage in wasteful attempts to shift costs or risks onto other parties to the enterprise. In such a situation, theorists have argued, it might be better to organize within a single firm, where managers can use a variety of different organizational and reward schemes to try to elicit cooperation.¹⁶

But what factors cause production stages to be interdependent? Interdependence can occur when a party to the enterprise makes investments in assets that are specific to that enterprise. In that case, others participating in the enterprise can take advantage of this firm-specific investment by demanding a larger share of the profits generated by the enterprise or by forcing greater liabilities and risks onto the investing party than the investor thought she would bear when she made the decision to invest. The party making the investment would be vulnerable to this “hold up” by the others because those assets will not produce the hoped-for return without full cooperation from all parties.¹⁷ Thus, Oliver Williamson and others have argued that where such investments are important, it may often be cheaper to carry out the various steps within a single

209 (1997). Incentive schemes are “high-powered” if efficiency gains in a transaction are allocated directly to the participants in the transaction, as would be the case if the parties were transacting in a market with their own assets. They are “low-powered” if the benefit of efficiency gains affects the transacting parties only indirectly, such as when the parties are paid a fixed wage with a bonus that depends only partly on the individual’s efficiency gains, or on the efficiency gains of a larger group.

16. See Bengt Holmstrom & Paul Milgrom, *Multitask Principal-Agent Analysis: Incentive Contracts, Asset Ownership, and Job Design*, 7 J.L. ECON. & ORG. 24 (1991); Holmstrom & Milgrom, *supra* note 15; Bengt Holmstrom & John Roberts, *The Boundaries of the Firm Revisited*, 12 J. ECON. PERSP. 73 (1998) (discussing the benefits of single-firm organization).

17. See WILLIAMSON, *supra* note 2; OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1985); 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) (exploring of the “hold-up” problem caused by firm specific investments); Benjamin Klein et al., *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297 (1978); see also Gilson et al., *supra* note 11, at 482–89 (arguing that a particular variety of firm-specific investments in knowledge increases the “switching costs” for parties in the contracts they study, yet also arguing that such investments tie the contracting parties together more tightly, and that the benefit of these ties more than offsets the costs of increased mutual vulnerability).

firm.¹⁸ Within-firm production, in which all of the highly specific assets are owned by a single entity, is thought to work better in such cases. If specific assets are owned by a single entity that is carrying out the entire enterprise itself, then the firm's managers might be able to maximize the efficiency of the joint enterprise, and participants will have fewer opportunities and incentives to try to push costs or risks onto another party within the entity.¹⁹ Implicit in this theory is that the potential for costly disputes among participants in an enterprise can be mitigated if the participants are all subject to the authority of a hierarchical decision-making process within a single firm.²⁰

Management theorists have recently explored a contributor to interdependence that stresses technological differences between production activities performed within firms and activities carried out across firms. Specifically, if the work of an enterprise can be organized into "modular" units, then interdependence between units is greatly reduced. Indeed, modularity is defined as a measure of the interdependence of steps in the production process.²¹ A

18. See WILLIAMSON, *supra* note 2; WILLIAMSON, *supra* note 17; see also Paul L. Joskow, *Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence*, 4 J.L. ECON. & ORG. 95 (1988) (surveying evidence from several empirical studies that generally supports the hypothesis that investment in specific assets leads to vertical integration).

19. Klein et al., *supra* note 17, observe that in the 1920s, General Motors purchased auto bodies from Fisher Body Co., but when GM asked Fisher to build a plant adjacent to a new GM facility, Fisher initially refused. The authors speculate that this was because such a plant would be so dependent upon GM for its business. In response, GM integrated vertically by purchasing the whole Fisher Body company and making it a captive supplier to GM plants. Details of this account have been disputed in subsequent literature on the GM-Fisher relationship. See, e.g., Ramon Casadesus-Masanell & Daniel F. Spulber, *The Fable of Fisher Body*, 43 J.L. & ECON. 67 (2000) (debating the significance of the Fisher Body case); Ronald H. Coase, *The Acquisition of Fisher Body by General Motors*, 43 J.L. & ECON. 15 (2000); see also ERIC BROUSSEAU & JEAN-MICHEL GLACHANT, *NEW INSTITUTIONAL ECONOMICS: A GUIDEBOOK* 16 (2008) (summarizing empirical findings that "specific investment[] is both a statistically and economically important causal factor in influencing the decision to vertically integrate"); Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LIT. 629 (2007).

20. See Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 278 (1999) (explaining the role of a board of directors in a corporation and arguing that participants in the firm "enter into this mutual agreement in an effort to reduce wasteful shirking and rent-seeking by relegating to the internal hierarchy the right to determine the division of duties and resources in the joint enterprise").

21. See Carliss Y. Baldwin & Kim B. Clark, *Managing in an Age of Modularity*, 75 HARV. BUS. REV. 84, 84 (Sept.-Oct. 1997) (defining modularity as "building a complex product or process from smaller subsystems that can be designed independently yet function together as a whole"). The idea of modularity in production was popularized by Shawn Tully,

“module” is a component or a step in production that can be carried out separately from other steps or components, but is linked to those other steps through a common interface that allows it to link in multiple ways to more than one other type of component or step.²² The more “modular” different steps of production are, then, the less interdependent, and the easier it should be to govern the relationships among parties carrying out the steps by contracts rather than by within-firm hierarchical arrangements. For example, enterprise-specific investments at related or sequential stages of production tend to reduce modularity, while the use of standardized equipment, parts, metrics, and processes tends to increase modularity. The literature on modularity in production offers a useful framework for understanding and explaining the rapid growth in outsourcing by large firms. In this Part we briefly review the literature on the role of hierarchy in firms, especially firms where knowledge is an essential asset (Subpart A), and then we review the literature on the problem of modularity and interconnectivity between steps in the production process (Subpart B). Subpart B also identifies some implications of modularity for outsourcing contracts.

A. The Role of Hierarchy

Corporations and other business organizations typically are characterized by hierarchical governance. Hierarchical governance has been explained as a mechanism for gathering, processing and

The Modular Corporation, FORTUNE, Feb. 8, 1993, at 106; see also CARLISS Y. BALDWIN & KIM B. CLARK, 1 DESIGN RULES: THE POWER OF MODULARITY 63 (2000) (defining modularity); Bruce M. Kogut & Edward H. Bowman, *Modularity and Permeability as Principles of Design*, in REDESIGNING THE FIRM 243 (Edward H. Bowman & Bruce M. Kogut eds., 1995); Melissa A. Schilling & H. Kevin Steensma, *The Use of Modular Organizational Forms: An Industry-Level Analysis*, 44 ACAD. MGMT. J. 1149 (2000) (using logic of systems modularity to explain why some industries are highly integrated and others make greater use of modular forms); Timothy J. Sturgeon, *Modular Production Networks: A New American Model of Industrial Organization*, 11 INDUS. & CORP. CHANGE 451 (2002) (discussing independence found within modular units); Karl Ulrich, *The Role of Product Architecture in the Manufacturing Firm*, 24 RES. POL'Y 419 (1995).

22. See John Paul MacDuffie & Susan Helper, *Collaboration in Supply Chains: With and Without Trust*, in THE FIRM AS A COLLABORATIVE COMMUNITY: RECONSTRUCTING TRUST IN THE KNOWLEDGE ECONOMY 417 (Charles Heckscher & Paul S. Adler eds., 2006) (noting that the term “module” was first used to describe the components of a product, rather than the steps in a production process, and that as such, modules are “elements that are interdependent within, and independent across” elements); see also Perrow, *supra* note 3, at 222 (“[P]arts that must interact with each other in complex ways should be confined to a module whose only interaction with the rest of the system is through an interface.”).

distilling relevant information, for channeling such information to the parties who have decision-making authority within firms, and for coordinating an organization's activities and responses to new information.²³ Hierarchy has also been explained as a mechanism for resolving disputes among participants in the enterprise about who is responsible for what, and about how surpluses created by the enterprise are to be divided.²⁴ Both explanations are consistent with the idea that governance by fiat can help to overcome certain kinds of problems that would arise in purely contractual relationships. This idea goes back at least to the work of Herbert Simon,²⁵ who stressed that the employment relationship is central to understanding the nature of the firm. He suggested that a firm is different from a contractual relationship in that participants in a firm are employees, constrained in their relationships to each other by a hierarchical decision-making structure. The essence of the employment relationship, Simon claimed, is that the hiring party gets to decide the employee's activities, the production methods employed, and the relevant standards for both.²⁶

Although legal scholars neglected the role of firm hierarchy for many years,²⁷ in recent years economists and legal scholars have returned to the topic. Blair and Stout, for example, argue that corporate law creates a mechanism by which ultimate control over important assets and decisions involved in "team production" activities are taken away from the team members who are carrying out the activities and granted to an internal hierarchy headed by a board of directors.²⁸ Blair and Stout borrow Alchian and Demsetz's definition of "team production" as "production in which 1) several types of resources are used . . . 2) the product is not the sum of separable outputs of each cooperating resource . . . [and] 3) not all

23. See, e.g., Blair & Stout, *supra* note 20, at 263 (discussing the mechanism of hierarchical governance).

24. *Id.* at 278.

25. See HERBERT SIMON, MODELS OF MAN (1957) (exploring the nature of the employment relationship).

26. *Id.*

27. This neglect, we believe, was due at least in part to the influence of Alchian & Demsetz, who argued that the employment relationship is not the essence of the firm. Alchian & Demsetz, *supra* note 14, at 777.

28. See Blair & Stout, *supra* note 20, at 278–79 (discussing the hierarchical structure of decision-making authority in corporations).

resources used in team production belong to one person.”²⁹ Economists since Holmstrom have understood that, because the output of team production is nonseparable, there is no ex ante decision-rule that can allocate the output among the team members in a way that gives all of them clear incentives to make the optimal level of effort and contribution to the enterprise.³⁰ Hierarchical governance arrangements can alleviate these incentive problems.³¹

How does hierarchy solve the problem? The theory is that, if team members mutually agree to yield control to a manager or executive, they are then better able to make credible commitments to cooperate and not to act opportunistically toward one another.³² Corporate law, in particular, facilitates team production, according to Blair and Stout—not only by establishing governance by a board of directors, but also by creating a separate legal entity to hold the assets,³³ thereby making it difficult for shareholders, as well as managers or employees or other corporate participants, to extract assets once they have been committed to the corporation.³⁴ Holmstrom and Milgrom argue that a firm is characterized by the employee (1) “not owning the assets,” (2) “being subject to a ‘low-powered incentive scheme,’”³⁵ and (3) “being subject to the

29. Alchian & Demsetz, *supra* note 14, at 779. But while Alchian and Demsetz downplayed the importance of the employment relationship in resolving problems that arise in team production, Blair and Stout emphasize the importance of hierarchy and governance by fiat. *See supra* note 20.

30. Bengt Holmstrom, *Moral Hazard in Teams*, 13 BELL J. ECON. 324 (1982).

31. Raghuram G. Rajan & Luigi Zingales, *Power in the Theory of a Firm*, 113 Q. J. ECON. 387 (1998); *see also* SIMON, *supra* note 25.

32. The control that a corporation’s executives and board exercises over employees, by this theory, derives in part from the fact that the board, and its designees, control who has access to critical assets owned by the corporation. Moreover, the employees have opted to yield to such control by choosing to work in the firm. *See* Grossman & Hart, *supra* note 17; Rajan & Zingales, *supra* note 31.

33. *See* Blair & Stout, *supra* note 20, at 282–283 (noting that participants in firms contribute investments that are then owned by the firm). This is similar to the role identified by the asset partitioning theory in Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387 (2001).

34. *See* Margaret Blair, *Locking In Capital: What Corporate Law Achieved for Business Organizers in the Nineteenth Century*, 51 U.C.L.A. L. REV. 427 (2003).

35. *See* Nicolai J. Foss, Henrik Lando & Steen Thomsen, *The Theory of the Firm*, in 3 ENCYCLOPEDIA OF LAW AND ECONOMICS, THE REGULATION OF CONTRACTS 637–38 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000), *available at* <http://encyclo.findlaw.com/5610book.pdf>. These authors credit Holmstrom & Milgrom, *supra* note 16, with this three-part characterization.

authority of the employer.”³⁶ These characteristics are complementary: a person who does not own assets used in production should not be given high-powered incentives focused on short-term narrow measures of performance because she is unlikely to be motivated to take proper care of the assets if doing so sacrifices immediate productivity in any way.³⁷ But if employees are given low-powered incentives, the employer must be able to exercise authority over use of the employee’s time.³⁸ Oliver Hart (whose seminal work in this area adopted a “property rights” based theory of the firm³⁹), alone and with Sanford Grossman and John Moore, distinguishes “employment” from “contracting” in terms of who decides which production method is used. In a contracting relationship, they observe, the seller chooses the production method, while in an employment relationship the buyer chooses.⁴⁰

If hierarchy serves the purposes outlined here, then to understand outsourcing we need to understand what factors make hierarchical decision-making less valuable, or otherwise make it possible to substitute contractual governance for hierarchy.⁴¹

B. Knowledge, Transfers, and Interdependence of Production

Recent work on the theory of the firm recognizes that one of the most important assets to be developed and managed within a firm is knowledge, or the technology of production. The technology of

36. Foss, Lando & Thomsen, *supra* note 35, at 638. While it seems uncontested to us that these features characterize the employment relationship, we do not believe they are sufficient for defining a “firm,” since they would also apply to the relationship between a homeowner and a day laborer hired to work in the homeowner’s yard.

37. *Id.* (discussing the reason why the incentive instruments are complementary).

38. *Id.*

39. See Grossman & Hart, *supra* note 17, at 693–94; Hart & Moore, *supra* note 17, at 1120–21.

40. Oliver D. Hart, *Coase Lecture, Reference Points and the Theory of the Firm*, 75 *ECONOMICA* 404 (2008). However, it is not uncommon in outsourcing contracts for the customer to specify the production method in rather extensive detail, thus casting doubt on whether this distinction is dispositive. See discussion *infra* Part III.B.1.a.

41. See Oliver Hart & John Moore, *Contracts as Reference Points*, 123 *Q.J. ECON.* 1 (2008). In the *ECONOMICA* article, *supra* note 40, at 406–10, Hart utilized a “toy model” illustrated by a relationship between a singer and a person who wants to have the singer perform at a special event. Note that this example involves no physical capital, nor any specific assets of any kind. Thus there is no role for property rights in the latest model, and Hart does not attempt to explain how the buyer could compel the seller to use one method rather than another.

production is treated as static, or at least as exogenous, in most economic theories.⁴² Management theorists have studied questions about how knowledge is developed and used in firms, but so far, economists have done very little to either model how new ideas are created and used, or to incorporate those factors into theories of the firm.⁴³ But recent work seems to be making progress on these questions.⁴⁴

1. The role of knowledge in theories of the firm

A growing body of scholarship in management science attempts to understand the nature of firms by emphasizing that organizations have ways of “knowing” things and learning things that individuals do not.⁴⁵ Some of the knowledge of how to produce more or better goods may eventually be codified (as by patents), but initially it may

42. “It has been a persistent critique that the modern economics of organization ‘neglects technology.’” Foss, Lando & Thomsen, *supra* note 35, at 645. *See also* Érica Gorga & Michael Halberstam, *Knowledge Inputs, Legal Institutions and Firm Structure: Towards a Knowledge-Based Theory of the Firm*, 101 NW. U. L. REV. 1123, 1125 (2007) (“This literature [on theory of the firm], however, has largely ignored one very important variable: *knowledge resources* that firms use in the production process.”); Bengt Homstrom & John Roberts, *The Boundaries of the Firm Revisited*, 12 J. ECON. PERSP. 73, 90 (1998) (“[I]t is surprising that the leading economic theories of firm boundaries have paid almost no attention to the role of organizational knowledge.” (citation omitted)).

43. Models that appeal to the importance of firm-specific human capital and commentators that emphasize the importance of “team production” all accept and attempt to incorporate and explore the implications of specialized knowledge—“firm-specific human capital.” *See* WILLIAMSON, *supra* note 2; Grossman & Hart, *supra* note 17; Hart & Moore, *supra* note 17; *see also* Holmstrom, *supra* note 30; Blair & Stout, *supra* note 20. Likewise, evolutionary theories emphasize that knowledge is accumulated on the job and stored at least in part in the “routines” by which firms operate. RICHARD NELSON & SIDNEY WINTER, *AN EVOLUTIONARY THEORY OF ECONOMIC CHANGE* (1982). But none of this work addresses how knowledge is created, deployed, and passed from one participant to another. *See* Sidney Winter, *Toward a Neo-Schumpeterian Theory of the Firm*, 15 INDUS. & CORP. CHANGE 1 (2006) (discussing the difficulties involved in attempting to model innovation or entrepreneurship).

44. *See, e.g.*, Gorga & Halberstam, *supra* note 42, at 1127 (“We show that law affects management and production of knowledge. . . . We explain the use of intellectual property protections, restrictive covenants, and features of compensation systems as responses to firms’ need to bind knowledge.”).

45. *See* NELSON & WINTER, *supra* note 43, at 99–107 (discussing organizational routines as a mechanism for storing organizational memory); *see also* Julia Porter Liebeskind, *Knowledge, Strategy, and the Theory of the Firm*, 17 STRATEGIC MGMT. J. 93 (1996); J.C. Spender, *Making Knowledge the Basis of a Dynamic Theory of the Firm*, 17 STRATEGIC MGMT. J. 45 (1996); J.C. Spender & Robert Grant, *Knowledge and the Firm: Overview*, 17 STRATEGIC MGMT. J. 5 (1996); Haridimos Tsoukas, *The Firm as a Distributed Knowledge System: A Constructionist Approach*, 17 STRATEGIC MGMT. J. 11 (1996).

be “tacit knowledge,” which employees learn as they carry out their duties, and know intuitively but have not yet written down. Tacit knowledge may also be imbedded in the “routines” adopted by the firm,⁴⁶ which are not necessarily known in their entirety by any individual employee, but which can still be carried out by the firm as a whole.⁴⁷

It may often be the special knowledge that firms possess in these ways that enables firms to earn “rents” by generating products and services that are more valuable on the market than the sum of the opportunity costs of all the inputs. And theory suggests that it is because much of the knowledge is tacit and/or encoded in internal routines that participants in the enterprise find it necessary to interact within a firm, rather than across markets or via contracts.

Knowledge-based theorizing about firms is in its infancy, and still has many unresolved problems. Some theorists have focused on the importance of firms’ “core competencies,” for example, and have argued that firm managers should construct the boundaries of firms so that the firms encompass valuable knowledge.⁴⁸ Other theorists argue that hierarchical governance is important in firms where knowledge is important because managers who can direct employees can facilitate the efficient transfer of knowledge within the

46. NELSON & WINTER, *supra* note 43.

47. See Winter, *supra* note 43, at 45 (“Does anybody in the large firm know what’s going on? Answer: No. Any single individual’s conceptual understanding of the firm in its entirety is mainly at an extremely abstract and aggregative level. . . . But these severe limitations on the knowledge of each participating individual do not imply that the *firm* does not know anything very well. For the firm to ‘know’ a productive technique it is necessary and sufficient that each individual know his job when the firm is employing the technique. . . . By far the most important coordinating and organizing force is the invisible interlocking structure of mutually consistent expectations held by the various members of the organization: each correctly expects that he will receive familiar signals from the others and will respond in the familiar ways.”).

48. Nicholas Argyres, *Evidence on the Role of Firm Capabilities in Vertical Integration Decisions*, 17 STRATEGIC MGMT. J. 129, 131 (1996) (citation omitted); see also Liebeskind, *supra* note 45.

organization,⁴⁹ and/or ensure that participants avoid transferring knowledge outside of the firm.⁵⁰

2. *Interconnectedness vs. decomposability*

Another type of knowledge problem arises when the information and resources available to different parties to the enterprise, and the actions expected of each, are highly fluid and interconnected. Suppose for example that participants in an enterprise want to develop and commercialize a new technology, such as the next generation of gene-sequencing technology. The project will require a high level of engineering knowledge of existing technology and how it is used in laboratories, what problems the technology has and where the bottlenecks are, as well as knowledge of the latest experimental methods being used in research laboratories at biotech firms, pharmaceutical firms, and universities. Team members will also need to be able to project production costs for new machine designs, and understand something about the potential market for them. No single member of any team of researchers and technicians is likely to have all of the necessary knowledge for the project, but team members hope that working together they might be able to accomplish the task. It is likely that the work cannot easily be divided up into pieces that each team member could accomplish in isolation. In fact, team members might need to interact with each other repeatedly, with some searching for ways to alter different aspects of existing technology, others subjecting the new approach to analysis and trial by the other parties, and other team members figuring out how to automate the process and engineer the machines so that they are affordable and reliable.⁵¹

49. KENNETH J. ARROW, *THE LIMITS OF ORGANIZATION* (1974); Bruce Kogut & Udo Zander, *Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology*, 3 *ORG. SCI.* 383 (1992); Bruce Kogut & Udo Zander, *What Do Firms Do? Coordination, Identity, and Learning*, 7 *ORG. SCI.* 502 (1996); Jack A. Nickerson & Todd R. Zenger, *A Knowledge-Based Theory of the Firm—The Problem-Solving Perspective*, 15 *ORG. SCI.* 617 (2004).

50. See Kathleen R. Conner & C. K. Prahalad, *A Resource-Based Theory of the Firm: Knowledge Versus Opportunism*, 7 *ORG. SCI.* 477 (1996); Harold Demsetz, *The Theory of the Firm Revisited*, 4 *J.L. ECON. & ORG.* 141 (1988); Gonzales-Diaz & Vazquez, *supra* note 3, at 266 (noting that standard theories argue that firms “use vertical integration to avoid sharing information about production know-how, customer information, and product or process design with other firms”); Liebeskind, *supra* note 45.

51. See Nickerson & Zenger, *supra* note 49, at 619–20 (referring to the ease or difficulty with which a search for new knowledge can be broken up into tasks that can be

The fluidity of the discovery process and the interconnectedness of team members' findings, as well as the unpredictability of the sequence of steps required in response to each new finding, might seem likely to sabotage any attempt to govern such a project by formal contract.⁵² If the project is carried out by employees within a single firm, however, the relationships among participants can be more loose and fluid because participants can shift the direction of their efforts as needed without insisting on writing every expectation or accomplishment down and assigning prices or values to them. Team leaders can set the direction, monitor assignments, and determine the compensation for the whole team and for each member.⁵³ Development and commercialization of complex technologies is thus a type of productive activity that, until recently, was generally thought to be better governed by hierarchy within a firm rather than across several firms.⁵⁴

Some productive activity, however, may be highly "decomposable," meaning that steps in the project can be separated from each other and sequenced, with each one completed or nearly-completed before it is passed along to become an input into the next step. One of us has seen an apparel manufacturing facility, for example, where fabric cutting operations were carried out by one firm, and the assembly operation carried out by a separate firm. Both firms, as it happened, operated in the same building, but there was a

accomplished in isolation as the "decomposability" of the project).

52. See Gilson et al., *supra* note 11, at 459–71 (examining a small collection of contracts that govern relationships between firms collaborating on new technology development and suggesting that, in some cases, innovation can be managed by contract, rather than by hierarchy within a single firm). We say more about the possibility that outsourcing contracts can enable firms to manage new technology development across firm boundaries in Part IV.B. and note 126.

53. Teams can be self-managed as well, though most approaches to compensating participants and allocating rents within a self-managed team are fraught with incentive problems. See, e.g., Bengt Holmstrom, *Moral Hazard in Teams*, 13 BELL J. ECON. 324 (1982) (showing a classic economic model of the incentive problems within self-managed teams); see also Louis Putterman, *On Some Recent Explanations of Why Capital Hires Labor*, 22 ECON. INQUIRY 171 (1986) (discussing major theories about why most firms are not organized as self-managed teams).

54. Harold Demsetz, *Profit as a Functional Return: Reconsidering Knight's Views*, in OWNERSHIP, CONTROL AND THE FIRM: THE ORGANIZATION OF ECONOMIC ACTIVITY 236–47 (1988) (arguing, for example, that economic actors organize themselves into firms to economize on expenditures on communicating and coordinating knowledge, a function at the heart of innovation). For the most part, however, economic theories of the firm do not directly address innovation.

wall separating one firm from the other.⁵⁵ When projects can be broken down into tasks that have little interaction with one another, production design theorists say that such projects are decomposable into “modular” tasks. Modularization refers to the process of breaking apart the various tasks and steps involved in producing some good or service into units that are well-specified and self-contained, but that can work effectively with a number of different other units.⁵⁶ Such units can more easily become the basis for organizing production in markets or by contracts, rather than under the direction of a hierarchical governance arrangement. From this perspective, firms help organize production that is not readily decomposable into productive modules, whereas production that is decomposable can more readily be organized through markets and contracts.⁵⁷

Standardization can help to modularize the production process. For example, modularization is facilitated when the physical characteristics of products and components as well as information such as weights, measures, protocols, and programming languages are “standardized.”⁵⁸ Standardization creates common understandings about technical and performance characteristics of products and services that can be observed and measured by independent third parties for purposes of contract negotiation,

55. One of us (Blair) toured such a facility in the Dominican Republic in the spring of 2006 as part of her duties as a member of the board of directors of WRAP (Worldwide Responsible Accredited Production), which sets standards for fair and humane production operations in labor-intensive industries. WRAP officials suspected that both “firms” (the cutting operation and the assembly operation) were owned and operated by the same parties, so that the division between them may have been somewhat artificial. The separation served the function, however, of allowing the cutting operation to be certified as meeting the WRAP standards without having to solve all of the labor and safety problems in the assembly part of the operation.

56. See BALDWIN & CLARK, *supra* note 21 (“A module is a unit whose structural elements are powerfully connected among themselves and relatively weakly connected to elements in other units.”).

57. This hypothesis is in contrast to NELSON & WINTER, *supra* note 43, who argue that firms are repositories of “routines.” We are suggesting that firms can support activities that are not at all routine if the participants are willing to yield some control to managers so that they do not need to stop, measure, and compensate every transfer. See discussion of “transfers” in contrast to “transactions,” *infra* Part II.B.3.

58. See Gorga & Halberstam, *supra* note 42, at 1146 (“Standardization is the process through which tacit knowledge is made explicit, formalized, and then codified or instantiated in physical processes and products.” (citation omitted)).

coordination, and enforcement.⁵⁹ Standardization also makes it easier for firm participants who carry out one activity or task to interact not only with other units in the same firm, but with other organizations outside the firm. Thus it may be possible, or much easier, to organize standardized approaches to production through markets and contracts, making hierarchy and fiat relatively less attractive.

3. *The role of “complex, interdependent, and iterative transfers”*

Professors Carliss Baldwin and Kim Clark of Harvard Business School formalized the concept of modular production in a treatise published in 2000,⁶⁰ and in recent years, Baldwin has explored the implications of this concept for a theory of the boundaries of firms in a productive system.⁶¹ In all but the simplest production activities, tasks involved in producing something are not all carried out by a single individual, Baldwin observes. Thus, she says, “it is necessary to *transfer* various things—material, energy, and information—from agent to agent in a productive system.”⁶²

Baldwin distinguishes such “transfers” from “transactions,” which are the primary units of analysis under transactions-cost theories of the firm.⁶³ “Transactions” are a “mutually agreed-upon set of transfers between two or more parties, with compensatory payment.”⁶⁴ “Transfers,” by contrast, can occur in units of any size, with no formality, no necessary prior agreement among the parties, no necessary measurement and evaluation, and no compensation.⁶⁵ Thus the “transactions costs” associated with a simple transfer are much lower than they would be for a formal “transaction” involving the same flow of information or materials between the same two

59. See Margaret Blair, Cynthia A. Williams & Li-Wen Lin, *The New Role for Assurance Services in Global Commerce*, 33 J. CORP. L. 325 (2008) [hereinafter *Assurance Services*]; Margaret Blair, Cynthia A. Williams & Li-Wen Lin, *The Roles of Standardization, Certification, and Assurance Services in Global Commerce*, IN CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE GOVERNANCE: THE CONTRIBUTION OF ECONOMIC THEORY AND RELATED DISCIPLINES 299 (Lorenzo Sacconi et al. eds., 2010).

60. See BALDWIN & CLARK, *supra* note 21.

61. See Baldwin, *supra* note 9.

62. *Id.* at 163.

63. *Id.* at 164.

64. *Id.* Baldwin notes that Coase used the phrase “exchange transaction” to mean what she calls a “transaction,” and he used the phrase “internal transaction” to refer to what she calls a “transfer.” *Id.* (citing Coase, *supra* note 2, at 393–98).

65. See *id.* at 164–65.

individuals. “Tasks” that are carried out as part of a production process may involve multiple transfers among the parties working on the task, with information and materials moving back and forth perhaps many times.⁶⁶

Baldwin (following Baldwin and Clark) illustrates the structure of such complex tasks using a “task structure matrix” (TSM).⁶⁷ A simple TSM for making and utilizing pot hooks is illustrated in Fig. 1 below.⁶⁸ The matrix lists all of the individuals involved in making a pot hook in an ironsmith shop, and in using the pot hook in a kitchen, down the left side of the grid, and across the top of the grid. If any two individuals in the grid will have to transfer materials, energy, information, knowledge, or resources between them, an x is placed in the off-diagonal square of the grid representing the interaction of those two individuals. It is assumed that there are five individuals in the smithy part of the operation (S1–S5), and five in the kitchen part of the operation (K1–K5). Those who work together in the smithy frequently exchange information and materials as they work, so all of the off-diagonal squares within the smithy subset of the grid have an x. Similarly for all of the off-diagonal squares within the kitchen part of the grid. But very few transfers are necessary or expected between individuals in the smithy and individuals in the kitchen. Thus there is only one square with an x (representing an interaction and transfer between S5 and K1) in either the upper right quadrant or the lower left quadrant. This x represents the transfer of the finished pot hook to one of the kitchen workers, for use in the kitchen.

66. See *id.* at 162 (“The basic unit in the design of any production process is a *task*.”). Baldwin also says that “the primitive units of analysis are decisions, components, or tasks,” and “decisions, components, and tasks are more microscopic than stages, but more concrete and directly observable than knowledge.” *Id.*

67. Similar matrices used to understand complex organizational structures have been called “design structure system[s]” in Donald V. Steward, *The Design Structure System: A Method for Managing the Design of Complex Systems*, 28 IEEE TRANSACTIONS ON ENGINEERING MGMT. 71 (1981), and “design structure matrix[es]” in Steven D. Eppinger, *Model-Based Approaches to Managing Concurrent Engineering*, 2 J. ENGINEERING DESIGN 283, 285 (1991).

68. See Baldwin, *supra* note 9, at 167.

Figure 1
Task and Transfer Network for a Smithy, a Kitchen and an Iron Pot Hook

		Smithy					Kitchen				
		S1	S2	S3	S4	S5	K1	K2	K3	K4	K5
Smithy	S1	.	x	x	x	x					
	S2	x	.	x	x	x					
	S3	x	x	.	x	x					
	S4	x	x	x	.	x					
	S5	x	x	x	x	.					
Kitchen	K1						Pot Hook	x	x	x	x
	K2						Transfer	x	.	x	x
	K3							x	x	.	x
	K4							x	x	x	.
	K5							x	x	x	x

Figure 1 is taken from Carliss Y. Baldwin, *Where Do Transactions Come From? Modularity, Transactions, and the Boundaries of Firms*, 17 *INDUSTRIAL & CORPORATE CHANGE* 162, 167 (2007) (Figure 1).

In this simple example, we would expect many if not all of the exchanges among smithy workers to be mere transfers, with no formalities. And we would similarly expect the exchanges among the kitchen workers to be informal transfers. In fact, the interactions among the smithy workers are likely to be frequent, iterative, and complex, in the sense that the workers interact with each other frequently and repeatedly.

A “transaction,” by contrast, requires the parties to define and measure the objects being transacted, and for the purchaser to compensate the supplier. If every transfer at every interaction between any two smithy workers had to be defined, measured, and compensated, we can imagine that the process would quickly bog down under the weight of the associated administrative costs.⁶⁹

But a transaction, in which what is exchanged is defined, measured, and compensated, makes a great deal of sense for the exchange between S5 and K1. In this exchange, S5 delivers to K1 the completed pot hook, and K1 pays S5 for the pot hook.⁷⁰ The

69. Baldwin refers to the costs of defining, measuring, and compensating a transfer as “mundane transactions costs.” *Id.* at 164.

70. *See id.* at 167.

task of delivering the finished pot hook to its purchaser is not complex or iterative because it is a one-off transfer, and it is relatively easy to define what is being transferred (one pot hook), to measure it (including its size, weight, and performance characteristics), and to compensate the smithy for the pot hook with money.⁷¹ No other interaction is required between individuals in the smithy and individuals in the kitchen.

So in this simple example, it makes sense to locate a *transaction* at the nexus between S5 and K1, but it probably would not make sense to locate transactions anywhere else in the task structure matrix.

It is not hard to imagine that a task structure matrix constructed to map out all of the interactions among participants in a project to develop and market a new technology, such as a new drug for treating schizophrenia, would be huge, with areas that are extremely complex and dense (e.g., the interactions among the biochemists, neurologists, and the lab technicians in the laboratory), and other areas that are less dense and complex (the interactions between the neurologists on the research team and the package designers in the marketing department). Baldwin notes that a goal of organizational design is to figure out where in a map of all the transfers it might make sense to construct organizational boundaries, at the edge of which all transfers are “transactions,” and where this would not make sense.⁷² This, of course, is exactly what is happening when a firm decides to outsource some activity—it is deciding to construct a new organizational boundary, after which subsequent transfers across that boundary will be converted into “transactions.”

The plotting of tasks in a task structure matrix helps illustrate the notion of modularity discussed above. In a task structure matrix, modules appear as densely connected blocks, such as the block of x's indicating interactions among workers in the smithy. If there are only a few, simple out-of-block transfers in such a matrix, then the underlying network is highly modular. In many productive enterprises, however, the tasks and transfers do not have such natural break points. Wherever there are extensive out-of-block transfers, the production process is inherently less modular. Places on the matrix where the interaction between blocks involves only one or a few

71. *Id.* at 167–68.

72. *Id.* at 165.

transfers are referred to as “thin crossing points,” whereas places where the interaction involves many participants and transfers are called “thick crossing points.”⁷³

The simple insight Baldwin takes from this way of describing production technology is that *transactions*—in which what is being transferred must be *identified, measured, and compensated*—should take place at “thin” crossing points.⁷⁴ Interactions at thick crossing points, however, should be managed by a process that suppresses the need to specifically identify, measure, and compensate every transfer, because at these junctures, the cost of identifying, measuring and compensating is too high.⁷⁵ Instead, Baldwin argues, such transfers should be located in what she calls “transaction-free zones,”⁷⁶ such as within a firm, where exchanges and interactions are governed by a hierarchy.

Thus the modularity theory of the firm is that firms exist to govern the dense and complex transfers involved in activities and projects that cannot be reduced to modules. This theory is obviously consistent with, and linked to, the economic literature on theory of the firm that builds on Coasian and Williamsonian theories of choosing governance structure to minimize transactions costs.⁷⁷ Baldwin, however, distinguishes the work that goes into defining, measuring, compensating, and otherwise specifying the terms of transactions, which she calls “mundane transaction costs,” from the “opportunistic transaction costs” that economists have emphasized.⁷⁸ In her theory, tasks and transfers are connected in a network, and are characterized by how the people involved in production must interact in their daily effort to get a job done collectively, rather than by how information and incentives can be manipulated to get participants to do their jobs.⁷⁹

Baldwin’s analysis suggests that transaction costs will be kept to a minimum if the boundaries of firms are at thin crossing points,

73. *Id.* at 172. “At thin crossing points between modules, there are, by definition, fewer and simpler transfers than within modules. Mundane transactions costs will thus be low at thin crossing points.” *Id.* at 166.

74. *Id.*

75. *See id.* at 171.

76. *Id.* at 180.

77. *See supra* note 3 and accompanying text.

78. *See Baldwin, supra* note 9, at 166, 171.

79. *See id.* at 163.

where exchanges can be structured as transactions and governed either by simple market exchanges or by formal contracts in which what is being exchanged can be readily identified, measured, and compensated.⁸⁰ This analysis seems intuitively useful to us, and we believe it helps us explain features of the outsourcing contracts we observe. In particular, we will identify a number of features of outsourcing contracts that we think can be interpreted as mechanisms for reducing the density of interactions at “crossing points,” while other features seem to be designed to standardize aspects of managing interactions at crossing points that will continue to be thick, despite taking place across firm boundaries.

4. Implications for outsourcing contracts

Outsourcing contracts are devices for creating a firm “boundary” between activities that had formerly been carried out within a firm. If the modularity theory of the boundaries of the firm is correct, it predicts that contractual governance should be used instead of hierarchical governance only at places in the production process that are, or can be made to be, “thin crossing points.” These are places where “transfers” between parties involved in production can be *identified, measured, and compensated*⁸¹—in other words, places where transfers between parties can become “transactions.”⁸²

If this is correct, we should find evidence in the contracts we examine that firms have figured out how to reduce the degree of interconnectedness among different phases of production in order to reduce the thickness of the crossing points at the place where the new boundary has been located. We will discuss several ways we think this might be happening below.

But reducing the thickness of the crossing points may be only part of the story. The other part of the story, we suspect, has to do with finding contractual mechanisms for reducing the “mundane” costs of transactions—the costs of identifying, measuring, and compensating—even at thick crossing points, and thereby reducing the vulnerability that a party faces when transacting at these thicker points. Mechanisms for reducing mundane transactions costs include devices for standardizing the processes for identifying, measuring,

80. *See id.* at 165.

81. *See id.* at 156.

82. *See id.*

and compensating what is being transacted. The more the features of a task can be standardized, it seems to us, the lower the cost of identification, measurement, and compensation, and the easier it is for the task to be carried out by one party and then delivered to the next party in the production chain in a simple transaction. Fully modularized activities or tasks tend to be highly standardized and separable from other tasks in a production chain, and as such, can more easily be governed by relatively simple contracts. Even partially standardized terms can help to reduce transactions costs.

The parties to transactions at thick crossing points also face vulnerability stemming from the fact that each ends up enmeshed in the business of the other. To be sure, this enmeshment can help to harmonize the parties' interests,⁸³ but to the extent those interests continue to diverge, the thicker crossing points leave each party especially vulnerable to the opportunistic behaviors of the other.⁸⁴ This problem is intensified at thick crossing points precisely because by definition the terms of the parties' transaction cannot be fully specified. Contracts at thick crossing points, it seems to us, must include provisions that attempt to reduce transactional vulnerability.

This analysis helps us formulate several hypotheses about what outsourcing contracts must accomplish to be able to effectively govern a set of activities that had previously been governed by hierarchy:

- 1) The contracts must create "thin crossing points" by reducing the number of individuals who must interact with each other, and the frequency of interaction, in transferring things across the new firm boundaries. In other words, at least the significant events of contract, including negotiation, modification, dispute resolution, and termination, need to be made easier through the creation of thin crossing points.

83. This seems to be the argument that Gilson et al., *supra* note 11, at 459–71, are making in their discussion of contracts that govern agreements between firms to co-develop new technologies.

84. If two steps to a joint production process are interdependent, as we would expect at a thick crossing point, each is specific to the other. Such interdependency, Baldwin observes, is a form of "Williamsonian *asset specificity*." See Baldwin, *supra* note 9, at 170 (citing OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1985)). Investment in specific assets by parties to a business has been recognized as one of the factors that can lead business organizers to vertically integrate the steps within the same firm. See *supra* notes 17–20 and accompanying text for citations to literature linking specific assets to vertical integration.

- 2) The contracts must attempt to specify in advance, in some detail, what it is that will be transferred at each crossing point.
- 3) The contracts must specify how those things will be measured.
- 4) The contracts must specify how those things will be compensated.
- 5) The contracts must invoke, or arrange for developing, standardized methods for identifying, measuring, and compensating.
- 6) Because the contracts are supposed to govern activities that were formerly subject to hierarchical decision-making, they must have some sort of mechanism for resolving misunderstandings or disputes that will inevitably arise as the parties attempt to identify, measure, and compensate transactions in goods, ideas, and services that were previously transferred informally.
- 7) The contracts must incorporate provisions designed to reduce the vulnerability of the parties. In particular, both the firm that chooses to outsource its production or services and the service provider must find ways to either control or minimize the costs of adverse actions of the other party, given their enmeshment.

III. OUTSOURCING CONTRACTS AND THEIR ROLE IN CROSSING-POINT MANAGEMENT

A. Our Contracts

For use in this research project, the Chicago office of Kirkland & Ellis LLP gave us access to a small collection of outsourcing contracts with identifying information about the parties redacted to maintain confidentiality of the clients. These contracts were all drafted and/or negotiated by Kirkland & Ellis on behalf of the parties in the last nine years. All involved sizeable corporations that were arranging for substantial information technology, records management, manufacturing activities, software writing activities, or call center activity that the “Customer” corporation had previously handled internally to be done by an outside “Service Provider” organization, usually using personnel and facilities located in other countries. Kirkland & Ellis provided us with nine actual contracts,

plus several contract forms, appendices and amendments to contracts, and hundreds of other related documents.⁸⁵

For this paper, we have summarized and categorized provisions of seven outsourcing contracts. Five of these were for information technology services (including call centers, data management, and human resources management services), one was for a software writing project, and one was for manufacturing services. The shortest contract was 56 pages; the longest was a 77-page contract that included 14 exhibits, detailed in another 157 pages, for a total of 234 pages. The individual contracts and contracting parties are described in the Appendix in general terms. In this paper, each contract is referred to by a reference number created by the authors.

B. Thick and Thin Crossing Points

Many of the outsourcing contract terms we observed seemed designed to either thin a crossing point or to manage the fact that outsourcing contracts ultimately require that transactions occur at relatively thick crossing points. We discuss here a few of the contract provisions that (1) help to create thin crossing points; (2) attempt to either specify the terms of the parties' exchange or standardize the many procedures under which the relationship will be conducted (and accordingly to both thin the crossing points and help manage the fact that the crossing points remain relatively thick); and (3) attempt to reduce the vulnerability of the parties, given the impossibility of fully specifying the terms of their interactions.

1. Creating thin crossing points

Several features of the contracts that we examine can be interpreted, we believe, as mechanisms for thinning out the crossing points. In this first section, we focus on mechanisms adopted by the parties to thin the crossing points for significant events in the life of a contract, including negotiation and drafting, contract modification, and dispute resolution and termination.

85. Kirkland & Ellis gave us access to copies of nine actual contracts, a "form" for a Master Services Agreement, a data transfer agreement, and a contract order for services, as well as a large collection of supporting documents, memos and presentations to clients on drafting outsourcing contracts, and professional articles. In this article, we focus on seven of the actual contracts, although our discussion of these is informed by some of the other materials, and by Mr. Kirchhoefer's direct experience in negotiating the contracts. The seven contracts are described in the Appendix. All materials remain on file with the authors.

a. *“Master Agreement” plus “Statement of Work” structure.* The most obvious way that the seven outsourcing contracts we examined for this project facilitate a “thinning” of the crossing points is that the contracts themselves are structured in modules. Each document we examined is a “Master Agreement” designed to govern the overall relationship between the parties by defining a set of procedural and default rules that are to apply to a set of sub-agreements (variously referred to as “Statements of Work,” “Work Agreements,” or “Order Documents”) negotiated under the overall agreement. The Master Agreements do not specify any actual deliverables. Instead they establish a common set of definitions, principles, guidelines, and processes by which supplemental agreements about specific deliverables are supposed to operate. Under the terms of the Master Agreement, these supplemental agreements describe work projects or activities in detail, specifying deliverables, time frames, standards for quality and functionality, control and decision rights, personnel, pricing schedules, and other details. Thus the work associated with the Agreement is divided into units or components, with the Master Agreement providing a common interface between the Customer and the Service Provider for each project.

Importantly, the individuals representing each party in the negotiation and drafting of the Master Agreement differ from those representing each party in the negotiation and drafting of a Statement of Work. Lawyers draft the general rules of the parties’ relationship in the former, but the Statements of Work are drafted by individuals embedded within each firm with detailed knowledge of the specific work to be performed. By breaking the negotiation of the contract into modules, fewer individuals’ input is needed at each stage, and contract details may be more effectively specified. In addition, the Master Agreement can continue to remain in force for the parties as new Statements of Work are formed and old ones are modified, completed, or cancelled. The modularized structure of the contracts therefore contributes to both the flexibility and the continuity of the relationship.

Although the details of the Statements of Work are not necessarily standardized, Master Agreement provisions appear to be designed to reduce interdependencies among the various projects. For example, the Master Agreements include provisions that help keep problems and disputes that arise under one Statement of Work

contained, so that they do not spill over into the work being done under another Statement of Work. One way the Master Agreements do this is by providing that both the Master Agreement and any Statement of Work will continue to be in effect even if some other Statement of Work is terminated. For example, in Document 1.1.B, a section entitled “Termination of Statements of Work” provides that “[u]nless otherwise provided in this Agreement or the applicable Statement of Work, expiration or termination of such Statement of Work shall not terminate any other Statement of Work or this Agreement.”⁸⁶ Similar provisions appear in all of the seven contracts we examined.⁸⁷

The contracts also provide that the Service Provider must continue to perform the work associated with a given Statement of Work even if funds are being withheld by the Customer over a dispute about proper charges for work performed under a separate Statement of Work.⁸⁸ Thus, despite the expectation of a long term, multifaceted relationship between that Customer and the Service Provider, the contract attempts to divide up work to be done into functional or task-related modules and limit interaction among different modules.⁸⁹

b. Identifying a small number of key personnel as decision-makers.

All of the contracts we reviewed provide that each party to the agreement is to designate certain individuals to serve as the primary decision-makers for their side, at least with respect to some aspects of the overall relationship.⁹⁰ Document 1.2 provides, for example, that each party should designate a “Project Manager” for the Master Agreement, as well as Project Managers for each Statement of Work, and further provides that only these Project Managers have the authority to bind the corresponding party in determining whether

86. Doc. 1.1.B § 3.2, at 4.

87. Doc. 1.1.C § 3.2, at 4; Doc. 1.2 § 2.1, at 8; Doc. 1.3 § 4.2, at 13; Doc. 2.4 § 16.2(a), at 40; Doc. 2.5 § 3.2, at 11; Doc. 2.6 § 35.2, at 49.

88. Doc. 1.1.B § 24.1.1, at 45; Doc. 1.2 § 22.1, at 43; Doc. 2.5 § 21.6, at 52.

89. In several of the contracts, work is further subdivided within Statements of Work into “Service Towers,” defined, for example, in Document 1.1.C ex. 1, Defined Terms, at 9, as “a specified class of Services identified in a Statement of Work as a separate category of Services that is related to, but distinct from, other Services provided under such Statement of Work.”

90. Doc. 1.1.B § 13.1, at 18–19; Doc. 1.1.C § 13.1, at 21; Doc. 1.2 § 2.4, at 9; Doc. 1.3 § 2.2.1, app.12, at 4; Doc. 2.4 § 5.8(a), at 18; Doc. 2.5 § 17.2, at 26; Doc. 2.6 § 3.1, at 6.

work is being done adequately, in signing any change orders, and in resolving disputes.⁹¹ Similarly, Document 2.4 provides that each party will “designate a qualified employee of such Party to act as the primary liaison with the other Party regarding this Agreement and all Supplements.”⁹²

Depending on the nature of the work to be done by the Service Provider under any particular Agreement or Statement of Work, this structure may allow frequent and extensive interaction and transfers of material or information among rank and file individuals working on the project, but *transactions* between the corporations are recognized only when the respective Project Managers have approved or signed off.

Disputes that may arise in the course of the relationship are similarly channeled into thin crossing points through dispute resolution provisions that call for disputes to be resolved, if possible, by mutual agreement between identified project-level managers representing each party. If not resolved at that level, disputes are to escalate up a pre-determined hierarchy of manager pairs (one representing each party) to representatives of senior management in both companies. The Agreements also provide that no dispute may be the “subject of any court action” before going through the escalation procedure laid out in the contract.⁹³

2. Specification or standardization of terms and procedures

Many provisions of these very detailed contracts are devoted to specifying what is to be exchanged and how the parties are expected to behave over the course of the relationship. The Master Agreement attempts to specify the general structure of the relationship, while the Statements of Work focus on aspects of the specific services. As mentioned earlier, specification and standardization help to modularize the contracting process. Here we discuss a few ways that the Master Agreements help to specify or standardize terms and procedures. These contract features serve to both thin the crossing points of the transaction and help manage the fact that the crossing

91. Doc. 1.2 § 2.4, at 9.

92. Doc. 2.4 § 2.2(a), at 6.

93. Exceptions are provided for urgent matters where some sort of equitable relief, such as an injunction, is required to prevent leaks of confidential information or another event that might cause irreversible damage.

points are ultimately thicker than those observed in standard market exchanges.

a. Invoking or developing standardized metrics. An important mechanism for thinning the crossing points involves the development and use of standardized metrics for measuring performance. Three of the contracts, for example, had the following provision: “Service Provider shall implement at its expense, Measurement and Monitoring Tools . . . [to] permit reporting to Customer at a level of detail sufficient to verify compliance with the Service Levels and shall be subject to audit by Customer.”⁹⁴

All seven of the Agreements referred to external standards such as ISO 9000⁹⁵ series standards or the Information Technology Infrastructure Library (ITIL)⁹⁶ best practice standards, or the Software Engineering Institute (SEI) Capability Maturity Model (CMM) standards.⁹⁷ We also saw provisions that established a set of standards or metrics to be agreed to between the parties, sometimes called “Service Levels,” by which the Service Provider’s performance would be judged. Document 1.3, for example, defines Service Levels as “standards for performance, availability, reliability, quality, customer service, capacity, speed, timeliness, conformity, efficiency,

94. Doc. 1.1.B § 8.3, at 10; Doc. 1.1.C § 8.3, at 11; Doc. 1.3 § 8.3, at 19.

95. *See, e.g.*, Doc. 2.6 § 13.2, at 18 (“Service Provider shall maintain a quality management system (QMS) registered with a recognized third-party registration authority that covers the locations and scope of the Services provided to Large Customer. . . . Such QMS must conform to the specific requirements of ISO 9001:2000”); *see also* ISO 9000, WIKIPEDIA, http://en.wikipedia.org/wiki/ISO_9000 (last visited Mar. 25, 2011) (“The ISO 9000 family of standards relate [sic] to quality management systems and are designed to help organizations ensure they meet the needs of customers and other stakeholders. The standards are published by ISO, the International Organization for Standardization and available through [n]ational standards bodies.”).

96. *See* Information Technology Infrastructure Library, WIKIPEDIA, http://en.wikipedia.org/wiki/Information_Technology_Infrastructure_Library (last visited Mar. 25, 2011) (“ITIL gives detailed descriptions of a number of important IT practices and provides comprehensive checklists, tasks and procedures that any IT organisation can tailor to its needs. ITIL is published in a series of books, each of which covers an IT management topic.”).

97. Doc. 1.1.B § 8.1, at 10; Doc. 1.1.C § 8.1, at 10; Doc. 1.2 § 2.6.1, at 10; Doc. 1.3 § 8.1, at 18; Doc. 2.4 § 3.6, at 11; Doc. 2.5 § 8.1, at 17; Doc. 2.6 § 22.1, at 29; *see also* Capability Maturity Model, WIKIPEDIA, http://en.wikipedia.org/wiki/Capability_Maturity_Model (last visited Mar. 25, 2011) (“The Capability Maturity Model (CMM) is a service mark owned by Carnegie Mellon University and refers to a development model that was created after study of data collected from organizations that contracted with the U.S. Department of Defense, who funded the research. This became the foundation from which CMU created the Software Engineering Institute (SEI).”).

effectiveness and responsiveness that Service Provider shall be required to meet,” and devotes an appendix to explaining the “Service Level Methodology” by which performance in these dimensions are to be evaluated.⁹⁸ The individual Statements of Work under these Agreements provide further details about the Service Levels that apply to each separate body of work.

This effort to define and measure the objects of exchange between the contracting parties facilitates the process of transacting over, rather than just transferring, each object. Once metrics have been specified for measuring performance along the many relevant dimensions, this may reduce the need for agents of the Customer to supervise the Service Provider closely and continuously. Instead, the Service Provider is asked to measure its own performance using metrics it devises (or devises jointly with the Customer), and to prepare and provide reports to the Customer at regular intervals, such as monthly or quarterly.⁹⁹ This, it seems likely, makes it possible to reduce the intensity and frequency of required interactions between Customer and Service Provider over the particular products or services that are the object of the transaction.

b. Codification of processes. A substantial number of provisions in these contracts call for extensive codification of one sort or another. Most of the contracts require the Service Provider to put together a Transition Plan, for example, which details in advance how it would go about taking over work that the Customer had been doing for itself prior to signing the contract.¹⁰⁰ One contract required the Service Provider to develop a detailed Service Procedure Manual “that describes how Service Provider shall perform and deliver the Services under this Agreement.”¹⁰¹ This same contract also provides that a “Governance and Operations Manual” will be prepared and includes an appendix that details a “governance operating model” with “four components”: governance organization and staffing; decision-making; governance processes; and standard reporting and tools.¹⁰²

98. Doc. 1.3, app. 11, at 10.

99. Doc. 1.1.B § 8.3, at 10; Doc. 1.1.C § 8.3, at 11; Doc. 1.2 § 2.7, at 11; Doc. 1.3 § 8.3, at 19; Doc. 2.4 § 3.66, at 11; Doc. 2.5 § 8.3, at 17.

100. Doc. 1.1.B § 2.4, at 2; Doc. 1.3 § 2.6, at 3; Doc. 2.4 § 3.2, at 7; Doc. 2.5 § 2.3, at 10; Doc. 2.6 § 12.1, at 16.

101. Doc. 1.3, at 11.

102. Document 1.3 was the longest contract, with the most elaborate and detailed

Every contract that we looked at provides a procedure by which changes may be made to the services to be performed, or to the prices to be charged, during the term of any Statement of Work.¹⁰³ In Document 1.2, for example, Sec. 3 is devoted to “Change Management,” providing that each party may request changes to the work to be done under any Statement of Work. Once a change has been proposed, the Service Provider then reports to the Customer regarding any corresponding adjustments it believes should be made to the fee schedule, and further provides that “Parties shall negotiate in good faith a reasonable and equitable adjustment in each or any of the applicable fees, Deliverables, Services, Schedule, Milestones or Specifications.”¹⁰⁴

All seven of the contracts we looked at provided that Service Provider must draw up detailed plans in advance for what would happen in the event of a disaster or force majeure that caused the Service Provider to be unable for some period of time to carry out its responsibilities under the agreement.¹⁰⁵ These so-called “business continuity plans” are required to include some redundancy or backup of business in event of crisis. All seven contracts we examined

appendices. Appendix 12 of the contract is devoted to governance and describes the “objectives of governance” as to

(a) provide a set of principles, guidelines and process for the management of the relationship between the Parties and the performance of their respective obligations under this Agreement; (b) provide for the provision and receipt of the Services in accordance with this Agreement; (c) communicate on an ongoing basis regarding the purpose and scope of the Parties’ relationship pursuant to this Agreement and key Agreement terms and milestones; (d) clarify the decision-making rights, obligations, accountabilities, roles and responsibilities between the Parties; (e) monitor the SP’s compliance with the terms of this Agreement and the Customer Policies and Procedures; (f) provide for centralized governance of this Agreement such that all issues or exceptions arising in connection with the performance of the Services can be effectively and efficiently resolved; and (g) mitigate risks during the term of this Agreement and the associated Termination Assistance Services period that would impact this Agreement and the Parties’ relationship.

Doc. 1.3, app. 12, at 1–2. The staffing structure of the relationship under this contract is also routinized and codified to a high degree, with numerous positions specified such as “Customer Service Tower Lead/Executive” and “Service Provider Service Tower Service Delivery Manager.” Doc. 1.3, app. 12, at 7–8. To an outside observer, the level of detail in the contract seems cumbersome. In fact, it appears to try to emulate and specify what would be default arrangements of governance within a single firm.

103. Doc. 1.1.B § 5.3, at 6; Doc. 1.1.C § 5.3, at 6; Doc. 1.2 § 3.1, at 12; Doc. 1.3 § 10.1, at 20; Doc. 2.4 § 3.3, at 8; Doc. 2.5 § 5.1, at 13; Doc. 2.6 § 11.1, at 13.

104. Doc. 1.2 § 3, at 12.

105. Doc. 1.1.B § 9.1, at 11; Doc. 1.1.C § 9.1, at 12; Doc. 1.2 § 19.4, at 40; Doc. 1.3 § 20.5.2, at 52; Doc. 2.4 § 17.6, at 45; Doc. 2.5 § 13.1, at 21; Doc. 2.6 § 23, at 30.

also provide for the Customer to have priority rights relative to other customers of the service provider in the event of broad-based failure.¹⁰⁶

c. Periodic (rather than continuous) evaluation of performance against standards. Most of the contracts we looked at provided for several different approaches to evaluating performance. Development of “Service Levels,” discussed above, is one approach. Another approach referred to in the Agreements is a process called “Acceptance” by which the Customer determines whether work completed by the Service Provider is satisfactory. Document 1.2 defines “Acceptance Testing” as “(i) testing or review, and (ii) approval of Deliverables performed by Customer (whether with or without the participation of Service Provider) in accordance with the requirements of a specific Statement of Work to determine whether the applicable Deliverables comply with the Specifications and requirements set forth in this Agreement and such Standard of Work.”¹⁰⁷ The “Acceptance” process formalizes that the deliverable has been transferred to the Customer and is satisfactory. Once compensation is paid to the Service Provider, the transaction is complete. In this way, the Customer does not monitor the Service Provider continuously, but only examines and tests the completed tasks. But the fact that acceptance testing occurs at various phases of the project is designed to give the Customer some assurance that the work performed under the contract is proceeding forward at an acceptable pace and quality.

Some of the contracts provide for periodic “benchmarking,” in which the Customer hires a third party knowledgeable in the industry to review the package of services that the Service Provider is providing, the quality and performance levels of the services, and the structure of pricing for the services.¹⁰⁸ The “Benchmarker” then prepares a report that compares the package with what the Benchmarker believes other service providers are doing, at what prices, for similarly-situated customers. Of the contracts we reviewed, Document 1.3 provided the most detail about the benchmarking process. Appendix 7 to this document provides that “Customer,

106. Doc. 1.1.B § 9.1, at 11; Doc. 1.1.C § 9.2, at 13; Doc. 1.2 § 19.14, at 40; Doc. 1.3 § 20.5.2, at 52; Doc. 2.4 § 17.7, at 40; Doc. 2.5 § 13.1, at 21; Doc. 2.6 § 23, at 30.

107. Doc. 1.2 § 1, at 1–2.

108. Doc. 1.1.B § 19.2, at 35; Doc. 1.1.C § 19.2, at 37–38; Doc. 1.3 § 9, at 20.

Service Provider and Benchmarker are to agree on the methodology that will be used to conduct or support the specific Benchmarking Process and the normalization processes that will be applied.”¹⁰⁹ The Benchmarker is to compare the Service Provider’s performance in delivering the services to the performance of a panel of comparable service providers, and Service Provider is required “to bring its Charges within the top quartile” of the representative sample (“viewed from the perspective most beneficial to the Customer”).¹¹⁰ Under this Agreement, the Customer has the right “to benchmark any one or more Service Towers or any one or more components of the Services within a Service Tower” at least once each year, and if the benchmarking process indicates that the Customer is not getting a deal that places it in the top quartile of the control group, the Agreement provides grounds for the Customer to terminate the relevant services with 90 days’ notice (subject to payment of termination charges).¹¹¹ The contracts also all provide that the Service Providers would be subject to various financial, operational, security, and data management audits, usually at least once per year.¹¹²

Benchmarking and auditing provide ways for the Customer to apply a standardized measure of performance at periodic intervals without continuously monitoring the performance of the Service Provider. But they also serve to reduce the vulnerability of the Customer, which wants assurance that the Service Provider continues to deliver value to it.

3. Management of thick crossing points

While some features of the contracts seem designed to reduce the interdependencies between stages of production and the required interactions between agents of the two parties, others seem to anticipate that the parties will nonetheless be extensively enmeshed in one another’s business. Other features in the contracts provide mechanisms for managing that interface. We focus here on at least two categories of contract terms that seem to be about managing the

109. Doc. 1.3 § 35, app. 7, at 2.

110. Doc. 1.3 § 6.2, at 4.

111. Doc. 1.3 § 3.1, app. 7, at 1.

112. Doc. 1.1.B § 11.2, at 13–14; Doc. 1.1.C § 11.2, at 15–16; Doc. 1.2 § 10, at 27–28; Doc. 1.3 § 6.5, at 15; Doc. 2.4 § 5.7, at 17–18; Doc. 2.5 § 20, at 34–35; Doc. 2.6 § 19.2, at 26.

relationship at what Baldwin would probably call a “thick crossing point”: control rights and termination provisions.

a. Customer control over Service Provider personnel. Every contract we examined gave substantial control rights to the Customer over personnel decisions by the Service Provider. A typical clause provides that both parties are to designate individuals who are considered “Key Personnel,” and that “Service Provider shall not reassign or remove any such Key Personnel for eighteen (18) months from the date that such person is designated as Key Personnel, without prior express consent of Customer.”¹¹³ In every contract, the Customer was given the right to ask the Service Provider to remove an individual from the project along with the right of refusal for any new individuals the Service Provider wants to assign to the account.¹¹⁴ Several of the contracts provided that the Customer could give directions to Service Provider personnel. Document 1.1.B was quite specific about this, providing that Customer could deploy its own employees to “assist in, or oversee, the provision of the Services,” and could issue instructions to Service Provider employees regarding “choice of methodology or approach to providing the Services . . . instructions concerning compliance with applicable Laws . . . [and] instructions concerning processing of Customer Personal Data.”¹¹⁵

These provisions highlight the fact that the outsourcing relationship is something of a hybrid—formally governed by contract, but with characteristics such as customer control over personnel and process decisions that theorists have associated with within-firm governance. Each of the contracts, however, included very specific provisions to the effect that employees of the Service Provider are not in any way to be regarded as employees of the Customer.¹¹⁶ Document 1.2, for example, provides that:

Service Provider and Customer are not joint employers, a single employer, associated employers or related employers for any

113. Doc. 1.3, at 22.

114. Doc. 2.4, at 15, for example, provides that if Customer objects to some employee being assigned as “Key Personnel,” then “Supplier will not assign the individual to that position.”

115. Doc. 1.1.B § 13.7.1, at 21.

116. Doc. 1.1.A § 4.3, at 4; Doc. 1.1.B § 4.3, at 5; Doc. 1.1.C § 4.3, at 5; Doc. 1.2 § 4.8, at 15; Doc. 1.3 § 3.3, at 12; Doc. 2.4 § 4.2, at 14; Doc. 2.5 § 4.2, at 12; Doc. 2.6 § 20.3, at 27; Doc. 2.7 § 5.2, at 15.

purposes under this Agreement or otherwise . . . [and] Service Provider shall require all Personnel to sign an agreement in a form designated by Customer under which such Personnel shall (i) affirm they are not employees of Customer for any purpose and that they shall not exercise any right or seek any benefit accruing to the regular employees of Customer¹¹⁷

b. Termination provisions. All of the contracts that we examined significantly limit the right of the Supplier or Service Provider to terminate the contract.¹¹⁸ The limits on termination seem to be designed to protect the Customer once the Customer gives up its in-house capability to carry out the work itself and becomes dependent upon the Service Provider for those services. Document 1.3, for example, provides that the Customer may terminate the agreement for convenience after the agreement has been in effect for as little as one year, but must provide 180 days' notice and pay a termination charge.¹¹⁹ The Service Provider, by contrast, may not terminate for convenience for at least ten years, and then must still provide 180 days' notice.¹²⁰ Moreover, even if the Service Provider terminates the agreement for convenience according to the contract, it may still not terminate any Work Agreement that is still in effect, and the Master Agreement continues to apply to those Work Agreements until they are no longer in effect.¹²¹

If the Customer terminates for convenience, it must pay a termination charge, but if the Service Provider terminates for convenience, the contract provides that the Customer may "hire those employees of Service Provider and Service Provider's affiliates who were substantially dedicated to providing the Services [and] who wish to be hired" and "take assignment of contracts and licenses used and entered into exclusively to provide the Services."¹²²

Document 2.6 is even more restrictive for the Service Provider. While the contract provides a long list of reasons why Customer may terminate for cause (breach, unsuccessful Implementation Plan,

117. Doc. 1.2, at 15.

118. Doc. 1.1.B § 24.2, at 46; Doc 1.1.C § 24.2, at 48; Doc. 1.2 §§ 11.4, 11.6, at 28; Doc. 1.3 § 23.2, at 66; Doc. 2.4 § 16.3, at 41; Doc. 2.5 § 28.5, at 51; Doc. 2.6 § 36.3(a), at 51.

119. Doc. 1.3 § 23.1.1, at 55.

120. *Id.* § 23.2.1, at 60.

121. Doc. 1.3, at 55.

122. Doc. 1.3, at 62.

failure of Critical Service Level Event, Service Provider liability exceeding some cap, change of control, bankruptcy or insolvency, or occurrence of a force majeure event in which Service Provider is unable to restore service quickly enough), the contract provides that Service Provider may terminate for cause only if Customer is more than 90 days late in paying, has been notified that it is late, has been given 60 more days to pay after such notice, and the Service Provider has exhausted the internal dispute resolution process.¹²³ Service Provider may not terminate for cause for any other reason.

All seven of the contracts also provide that, upon termination, regardless of the reason for termination, Service Provider will be required to provide “termination assistance” for up to six months.¹²⁴ Termination assistance may include training the customer’s own personnel to do the work, or even training the personnel of a new service provider hired to carry out the services.¹²⁵

These contractual features may simply be evidence that the Customers in the contracts we examined have substantial market power relative to the Service Provider. But some of the service providers in the contracts we reviewed are large, well-established, U.S.-based corporations that did not have to accept stringent terms to get the business. Thus we are inclined to believe that the termination assistance provisions reflect a need on the part of the outsourcing corporation to manage and mitigate the effect of the fact that it will become dependent upon the service provider to carry out activities that are critical to its business.

IV. OBSERVATIONS AND COMPARISONS

A. Outsourcing Contracts and Transactions Costs

Outsourcing could prove beneficial to firms for many reasons. Some firms hope to evade regulatory burdens, some hope to capture the gains from economies of scale that specialized service providers might be able to achieve in the provision of specific services, and still others simply want to reduce the costs of doing business by outsourcing work to a firm that knows the local government and

123. Doc. 2.6, at 49–53.

124. Doc. 1.1.B § 24.11, at 48; Doc. 1.1.C § 24.11, at 50; Doc. 1.2 § 11.8, at 29; Doc. 1.3 § 23.4, at 61–62; Doc. 2.4 § 16.5(b), at 41; Doc. 2.5 § 28.6, at 52; Doc. 2.6 § 36.7, at 53.

125. Doc. 1.1.B § 24.11, at 48; Doc. 2.5 § 28.6, at 52; Doc. 2.6 § 36.7, at 53.

markets better. Whatever their reasons for wanting to outsource some activity, customer and supplier firms must be able to deploy fairly sophisticated contracting technology in order to manage the complex relationships that result when new boundaries between firms are inserted in places that had been “thick crossing points” within a single firm.

The contracting technology that we see in evidence in the seven contracts we examined has evolved substantially over time, and continues to evolve. As this technology improves, and as more firms gain experience with the types of arrangements discussed above, this may facilitate further growth in outsourcing. While this evolution in contracting technology might not be the primary explanation for the growth in outsourcing in recent decades, we suspect that outsourcing has increased in part because newly outsourcing firms are able to replicate and improve on governance arrangements that have been used by pioneers. Thus, contracting technology influences the practice of outsourcing at the margin and therefore warrants further understanding.

We hypothesize that the contract terms we have examined in this article can be understood as arrangements that help to reduce the “mundane” transactions costs—the costs of identifying, measuring, and compensating what is being transferred—as well as the opportunistic transactions costs that have been the focus of other studies.¹²⁶ We suspect that much of the benefit of outsourcing contracts lies in the development and use of terms that reduce such mundane contracting costs by, say, developing standardized language and measurement tools. Such tools not only facilitate the day-to-day interaction between the parties to the outsourcing contract but also serve to “modularize” the activity, and thereby lay the groundwork for governing a contracting relationship with another contractual party on another activity down the road.

126. See *Outsourcing Transactions*, *supra* note 10 (focusing on the way that outsourcing contracts reduce agency costs); Gilson et al., *supra* note 11 (focusing on the special contracting problems that arise when firms attempt to outsource innovation and arguing that practices that increase the “switching costs” for parties to such arrangements have the effect of counteracting incentives to defect and facilitating cooperative behavior by locking the parties ever more tightly into the relationship). Gilson et al. appear to be comparing the cost of staying in the relationship with the contractual party to the cost associated with switching to a new contractual partner, rather than comparing that cost to the cost of keeping the activity in-house.

B. Generalizing Crossing-Point Management in Outsourcing

Although we derived our hypotheses about outsourcing contracts after looking at the sample of contracts we describe in this paper, the small number of contracts and the single law firm involved in negotiating each of them severely limits our ability to claim that our crossing-point management hypothesis can be generalized. As a preliminary check on whether the contract terms in our seven contracts are common in other outsourcing contracts, we turned to a collection of 60 outsourcing contracts compiled by Professor George Geis¹²⁷ in order to begin to explore the extent to which the predicted types of contract clauses can be found in other outsourcing contracts. These contracts cover a fairly broad range of outsourced goods and services, including manufacturing, database management, call center services, human resource services, network management services, website development and maintenance services, check processing, and airplane maintenance. Professor Geis was kind enough to identify his contracts for us, and we have conducted an independent analysis of his contracts.

All 60 contracts in the Geis sample were adopted by the parties between 1994 and 2007.¹²⁸ Of these, 27 were signed in years 1994–2000, and 33 were signed in 2001–2007.¹²⁹ When we read the contracts in the sample, however, we learned that not all 60 of the contracts were outsourcing contracts in the sense that we use the term in this Article. Specifically, Professor Geis classified contracts as outsourcing contracts in cases where a firm had the internal capability to perform the contracted work,¹³⁰ whereas we are interested in cases where work was previously actually performed in-house and then later outsourced to another entity. For our analysis, we retained contracts in the Geis sample where it seemed plausible that the work was previously performed in-house but did not include contracts where it seemed unlikely that the work was previously performed in-house. In particular, we eliminated contracts where the service provider was promising to provide what seemed to be IT services wholly new to the customer. We also eliminated one contract where the parties were a parent and subsidiary because,

127. *Outsourcing Transactions*, *supra* note 10.

128. *Id.* at 258.

129. *Id.*

130. *Id.* at 257 & n.48.

given the close relatedness of the entities, it was not clear that work was being moved outside the boundary of the firm. Once we eliminated those contracts, we were left with 44 outsourcing contracts from the Geis sample. Of those 44, 20 were entered into between 1994 and 2000 and 24 were entered into between 2001 and 2007.¹³¹ We looked for the presence of certain provisions in these 44 Geis contracts that we suggest above would help to thin crossing points, assist in the specification, standardization and/or measurement of performance, or help to manage thicker crossing points.

Although this Geis-based sample is substantially larger than our sample, it is still not definitive, and we remain uncertain about whether we can generalize about the role and use of the terms we discussed in Part III for several reasons.

First, the Geis sample of contracts might well be biased also. To be sure, they are less biased than the small sample that we studied closely in this project because they were negotiated and drafted by lawyers in a number of law firms. But the Geis sample might well exhibit other biases. For example, Geis constructed his sample from contracts that had been disclosed in firms' financial disclosure documents filed with the Securities and Exchange Commission.¹³² This implies that his sample contracts all involved publicly traded firms on at least one side of the transaction. Moreover, SEC-registered firms are only required to disclose such documents if they are "material" (which means they must be rather large compared with the firm's overall operations) and not "highly-sensitive," a condition that is subject to multiple interpretations.¹³³ Therefore, this sample undoubtedly under-represents both small

131. *Id.* at 258–59.

132. *Id.* at 256.

133. Other researchers who have attempted to survey or compile data on publicly disclosed contracts by SEC-registered companies have reported that disclosure is "highly irregular," and that within the documents that have actually been disclosed, there is very little redaction, suggesting that the contents are not regarded as "highly sensitive" by the disclosing firms. See, e.g., Susan Maples, *Finding Contracts on Securities Disclosures Databases*, <http://www.slideshare.net/pwyp/susan-maples-pwyp-montreal-conference-2009> (analyzing confidentiality clauses in disclosed contracts); Paul Wachter, *Human Rights Clinic Exposes Corrupt Oil, Mining Contracts*, http://www.law.columbia.edu/media_inquiries/news_events/2007/December07/Africa_oil.

contracts and outsourcing arrangements that the parties regard as highly sensitive.¹³⁴

Second, the vast majority of the Geis contracts involve domestic rather than international outsourcing.¹³⁵ Once we conducted our own review of his contracts, we found that, of the original 60 contracts, 59 Geis contracts provided addresses for customer and service provider; of these, 53 involved outsourcing between two U.S. firms, one involved two Canadian firms, one involved two UK firms, and one involved two German firms. Only three contracts in his sample are clearly international in scope.¹³⁶ Thus, while our sample is biased in favor of international transactions, his appears to be biased against them. Still the comparison of these different samples could prove fruitful.

Third, we have not so far searched through the Geis contracts exhaustively; instead, we identified a few provisions that we believe are unusual in other types of contracts but that we believe are important in managing the special nature of outsourcing relationships, and looked for the presence of those provisions in the contracts.

And, fourth, we have not so far evaluated the Geis data with any sophisticated statistical methodologies. Instead, we simply compared the frequency of these provisions in contracts negotiated over time to get a sense of whether they seem to provide support for our predictions. A more sophisticated analysis of these contracts would be the subject of a follow-on project.

As an example of a term that thins crossing points, we looked to see how many of the Geis contracts in each period identified specific personnel or positions within each company who would have the authority to negotiate work statements or changes. Of the 44 contracts we categorize as outsourcing arrangements, 30, or 68.1%, had such clauses.¹³⁷ Of the 20 contracts entered into from 1994 and 2000, 13, or 65%, had such clauses, while 17, or 70.8%, of the 24

134. Highly sensitive contracts might be underrepresented because firms are sometimes able to obtain exceptions from the SEC so that they can avoid making highly sensitive contracts public.

135. *Outsourcing Transactions*, *supra* note 10, at 258.

136. The fact that only 3 of these contracts appear to present offshoring (not the 12 that Geis thought he had) might well explain Geis' puzzling conclusion that offshoring has no effect on contract form. *Id.* at 291.

137. *See infra* Table 1.

contracts entered into from 2001 through 2007, had such clauses.¹³⁸ Although the sample of contracts is too small to draw hard conclusions, the significant portion and modest increase in the frequency of provisions designating specific personnel who would have authority to modify contract terms over time is consistent with the hypothesis that contracting parties may be discovering value in including them in their agreements.

As examples of contract provisions that help to specify, standardize, or measure contract performance, we looked for the presence of (1) contract terms that identified or described the adoption of specific performance standards (as well as providing consequences for failure to comply with the standards), and (2) provisions that call for third-party benchmarking.

Table 1 indicates that approximately 80% of the 44 Geis contracts had clauses adopting specific performance standards. In addition, the trend toward including these provisions was clear: in the earlier period, 65% of the contracts included explicit performance standards, and in the later period the frequency jumped to 91.6%.¹³⁹ One might expect an even higher percentage of outsourcing contracts to adopt performance standards, but it could be that many outsourcing arrangements defer a discussion of the performance standards to the individual work statements rather than placing them in the Master Agreement. In any event, nearly all contracts we studied that had been drafted since 2001 included explicit performance standards.

Meanwhile, only 4 (20%) of the 20 contracts in the early period provided for third-party benchmarking and auditing, while 9 (37.5%) of 24 contracts signed in the later period have such clauses, according to Table 1.¹⁴⁰ Here again, this is suggestive of some learning over time of the value of these provisions in outsourcing contracts. This increase in contract clause adoption could also reflect the rapid development in recent years of available third-party assurance services worldwide, providing an institutional basis to support reliance on third-party benchmarking and auditing.¹⁴¹

Contractual requirements that the service provider develop a specific business continuity plan for ensuring performance in the

138. *Id.*

139. *Id.*

140. *Id.*

141. See *Assurance Services*, *supra* note 59, at 332–35.

event that external events threaten routine functioning of the parties under the contract strongly suggest that the parties believe that the customer firm will become highly dependent on the performance of the supplier firm once the customer winds down or eliminates its own internal capability of carrying out the activities that are the subject of the contract. Yet the Geis contracts do not reflect a high rate of usage of such clauses, with only 7 (35%) of the contracts in the earlier period, and 8 (33.3%) of the contracts in the later period containing such clauses.¹⁴² This low rate could be a function of the fact that very few of these contracts call for international outsourcing.

In terms of managing thick crossing points, we looked for (1) customer rights of control over supplier personnel, and (2) termination services provisions.

Regarding control rights, we searched the contracts for clauses that gave the customer rights of control over at least some of the service provider's personnel, as well as clauses that specifically disclaim that these service provider personnel are employees of the customer. Not all outsourcing contracts will warrant such control rights. A customer that outsources the production of basic product inputs (i.e., set screws) presumably does not need to keep tabs on the employees producing those inputs. Like Baldwin's pot hook example, some outsourcing could entail almost exclusively thin crossing points.¹⁴³ Thus we would not expect to see these control rights in all outsourcing contracts, but we should see them in some. In those sample contracts drafted between 1994 and 2000, only 6, or 30%, contained provisions granting the customer control rights over service provider personnel, and 10 out of 20, or 50%, included a provision stating that personnel performing the outsourced work were not employees of the customer.¹⁴⁴ For those contracts drafted in 2000 or later, the frequency of these provisions is somewhat higher.¹⁴⁵ Nine, or 37.5%, of the 24 contracts in the second period give the customer personnel control rights, while 18 out of 24, or 75%, include provisions denying that the personnel are employees of customer.¹⁴⁶

142. *See infra* Table 1.

143. *See supra* pp. 121–22.

144. *See infra* Table 1.

145. *Id.*

146. *Id.*

Finally, we looked for provisions requiring the service provider to perform services for the customer in the event of termination of the contract. Here we see an unchanging incidence in the use of these provisions: 9 of the 20 contracts in the earlier period, or 45%, included them while 11 of 24, or 45.8%, of the contracts entered into since then included them.¹⁴⁷ In sum, the Geis contracts provide more general evidence, albeit not always strong, of parties using contract clauses in ways that we predict. If a trend can be discerned, it seems to be in favor of greater incorporation of most of these clauses over time, however.

C. *Litigation over Outsourcing Contracts*

What we do not know yet is whether the inclusion of these clauses makes the outsourcing relationship successful over time. Do the parties sustain their outsourcing relationship for longer periods on average if the contracts contain more of the specialized contract provisions we identify? Are they less likely to find themselves in disputes that lead to litigation?

To our knowledge there has been little litigation over outsourcing agreements. We performed a search for litigation reported in the news media or through written judicial opinions and found only seven cases filed involving outsourcing contracts (six filed in U.S. courts and one in English courts). No doubt this number is underinclusive. Our efforts would have failed to uncover disputes that are litigated elsewhere and/or arbitrated without press attention, so it seems unlikely that these cases describe the universe of disputes. Nevertheless, they provide a glimpse into circumstances in which outsourcing has gone wrong.

In all except one case, the service provider sued the customer, typically either because the outsourcing relationship had been terminated¹⁴⁸ or because a portion of the outsourced activity had

147. *Id.*

148. In *Computer Servs. Corp. v. Sears*, for example, CSC filed suit against Sears to enjoin Sears' termination of the parties' outsourcing agreement. The parties disputed whether Sears' termination was for cause, and they eventually settled their dispute in mediation, at which point Sears agreed to pay CSC an undisclosed sum. Carol Sliwa, *Sears Ends IT Pact; CSC Seeks Payment*, 39 *COMPUTERWORLD*, May 23, 2005, at 1, 55. In *Metavante Corp. v. Emigrant Sav. Bank*, Metavante sued for nonpayment of technology services provided and for the termination fee provided in the contract for convenience-based termination. No. 05-CV-1221, 2009 WL 2058449 (E.D. Wis. July 6, 2009). Metavante won on all counts but was entitled to less than the full termination fee. *Id.* at *3-4. In *Vertex Data Sci. Ltd. v. Powergen*, Vertex sued

been taken back in house.¹⁴⁹ In one case, *Sourcecorp BPS, Inc. v. Kenwood Records Management*, the service provider argued that a contract provision giving the service provider the exclusive right to perform the outsourced service precluded the customer from taking the work back in house.¹⁵⁰ The court disagreed, finding that the exclusivity provision did no more than prevent the customer from using another outsource service provider.¹⁵¹ In at least four of the six cases involving partial or full termination, the service provider attempted to prevent the termination.¹⁵² In at least two of these cases, the service provider argued that the termination was for convenience rather than cause and the customer was therefore obligated to pay termination fees as provided in the contract.¹⁵³

In the case where a customer (Sprint) sued the service provider (IBM), Sprint argued that IBM owed it damages and free work because it failed to achieve agreed-upon productivity gains, failed to provide auditable data to support its claimed productivity gains, and failed to comply with contractually specified methods for measuring productivity.¹⁵⁴ In all of these cases the parties end up fighting about the terms that we believe are characteristic of, if not unique to,

Powergen seeking an injunction against Powergen's announced termination (allegedly for a material breach) of the outsourcing arrangement. [2006] EWHC (Comm) 1340 (Eng.), 2006 WL 2629805.

149. In *Sourcecorp BPS, Inc. v. Kenwood Records Mgmt., Inc.*, Kenwood had outsourced document imaging services that it had contracted to provide to one of its clients. 548 F. Supp. 2d 673, 674 (S.D. Iowa 2008). When Sourcecorp failed to adequately perform the required services, Kenwood performed some of the imaging itself. *Id.* at 677. In *Elec. Data Sys. Corp. v. Xerox*, EDS agreed to perform IT services, application development and management services for Xerox, but thereafter Xerox pulled back the servicing of employee laptops. 709 N.Y.S.2d 46, 47 (N.Y. App. Div. 2000). EDS sued to get its work back but later dropped the suit in exchange for a 5-year extension on the basic outsourcing arrangement. *Id.*; Nick Huber, *EDS Drops Xerox Suit and Signs Up for Five More Years*, COMPUTER WEEKLY, Dec. 16, 2001, at 10.

150. *Sourcecorp*, 548 F. Supp. 2d at 678–79.

151. *Id.* at 680–81. The finding in this case, if it applies broadly, suggests that the customer corporation retains the right to bring the activity back in-house unless it specifically gives away that right in the contracts. We did not see any contracts that constrained the customer companies from undertaking the contracted activity itself again except by means of the general termination provisions.

152. *Id.*; *EDS*, 709 N.Y.S.2d at 47; *Vertex*, [2006] EWHC (Comm) 1340 (Eng.); Sliwa, *supra* note 148.

153. *Metavante*, 2009 WL 2058449; Sliwa, *supra* note 148.

154. The *Sprint v. IBM* case eventually settled without disclosure of its financial details. Randall S. Parks, *Two Recent Cases Provide Some Rare Insight into What In-House Counsel Need To Know*, 21 CORP. COUNS. 1 (2006).

outsourcing contracts—terms put in place to thin crossing points, to specify, standardize or measure, or to help the parties to manage the inevitable thickness of the relationship. Perhaps future litigation (which will likely be generated by the recent worldwide financial crisis and current recession) can tell us more about the effectiveness (or not) of the types of contract terms that we identify in this article.

V. CONCLUSION

The contracts we examined for this project are extraordinary documents that attempt to specify and codify detailed terms of relationships that had previously been structured and governed by fiat. One possible reason why the firms enter into these relationships is that these contract devices reduce transaction costs to the point that transactions are cheaper than in-house transfers for the firm. Another possibility, however, is that the firm may be better able to take advantage of other cost savings, such as reduced labor costs and economies of scale and specialization, that outsourcing can provide only if outsourcing contracts successfully develop to the point where they could both effectively thin crossing points and manage the remaining thickness of the outsourcing relationship. Over time, the key to effectively contracting for outsourcing may turn on the modularization of outsourcing contracts, the modularization of the processes and work to be performed over the life of the outsourcing relationship, and the development of adequate contracting infrastructure such as model terms, tested language, and the emergence of an inspection and auditing industry that can perform third-party evaluation and benchmarking.

Our assessment of outsourcing contracts examined for this article challenges theoretical claims about the requirement of modularity for governance by contract, rather than by hierarchy, to be effective. Transactions do not have to occur only at extremely thin crossing points, because contracting techniques can be used to help the parties manage the vulnerability associated with contracting at relatively thick crossing points. Nonetheless, where parties attempt to insert firm boundaries at thick crossing points—places in the flow of productive activity where there is a high level of interconnection among the parties—new contracting technology must be used to manage relationships that in the past would have been managed by fiat within a hierarchy. Some of these contracts seem so complex, however, that they raise questions about whether they will, in fact,

reduce transactions costs and/or improve productivity over time. But as contracting technology evolves and develops, we expect to see more standardization of tools and terms that, in the long run, could make outsourcing increasingly feasible and attractive.

TABLE I

*Contracts Signed in 1994 – 2000**Total Contracts: 20*

Clauses	Contracts Containing Such Clauses	
	Number	Percentage
Specific Negotiating Personnel	13	65%
Adoption of Specific Performance Standards	13	65%
Third Party Benchmarking & Auditing	4	20%
Disaster Continuity Plan	7	35%
Personnel Control Rights	6	30%
SP Employees Not Client Employees	10	50%
Termination Services	9	45%

*Contracts Signed in 2001 – 2007**Total Contracts: 24*

Clauses	Contracts Containing Such Clauses	
	Number	Percentage
Specific Negotiating Personnel	17	70.8%
Adoption of Specific Performance Standards	22	91.6%
Third Party Benchmarking & Auditing	9	37.5%
Disaster Continuity Plan	8	33.3%
Personnel Control Rights	9	37.5%
SP Employees Not Client Employees	18	75%
Termination Services	11	45.8%

APPENDIX

The following is a description of seven contracts examined for this article. Documents 1.1.B and 1.1.C are based on a common form contract (which was Document 1.1.A in our files). Document 2.5 was negotiated, but never signed because the customer company ultimately decided against outsourcing the project that was the object of the negotiations.

Description of Documents:

Document 1.1.B: Master Services Agreement, based on Contract 1.1.A Form, by a large U.S.-based financial services firm with a service provider in India for call center services and customer services (for financial institution's customers). Agreement was signed by both service provider parent company in India and service provider's U.S.-based subsidiary (with latter having joint and several liability) to ensure customer would have recourse against a U.S. party with U.S. assets. Expected value of services was tens of millions of dollars per year. Details of specific services to be worked out in separate Statements of Work. Term of Master Agreement is indefinite. Signed in 2004.

Document 1.1.C: Master Services Agreement, based on Contract 1.1.A Form, by a large U.S.-based financial services firm with a large, prominent U.S.-based services provider for finance and accounting services and human resources services. Service provider intended to provide services from its operations and personnel in the Philippines and India. Expected value of services over time was hundreds of millions of dollars. Details of specific services to be worked out in separate Statements of Work. Term of Master Agreement is indefinite. Signed in 2006.

Document 1.2: Master Systems Implementation Services Agreement, by U.S.-based manufacturing company recently out of bankruptcy, with U.S. subsidiary of large Indian services company, for implementation work related to a new information technology (IT) system. Majority of software development, support, and related work was to be provided by personnel in India. Expected value of services was about \$20 million. Details of specific services to be worked out in separate Statements of Work. Term of Master Agreement is 5 years, with up to 2 renewal terms. Signed in 2005.

Document 1.3: Master Services Agreement, by U.S.-based electric and gas utility company, with large U.S.-based service provider for a variety of IT services. Service provider was to use U.S.-based personnel but had option to use personnel in Philippines and India for some services. Expected value of services was about \$500 billion. Details of specific services to be worked out in separate Work Agreements. Term of Master Agreement is 10 years. Signed in 2007. (This is longest contract in sample, at 234 pages including 14 exhibits.)

Document 2.4: Master Information Technology Services Agreement, by large U.S.-based financial services company, with a large U.S.-based services provider, for hosting of servers and applications support. Data center located in U.S., and majority of services to be provided by U.S.-based personnel, although service provider has the option to subcontract work and to send work offshore. Expected value of contract was about \$100 million over life of contract. Details of specific services to be worked out in separate Supplements. Term of Master Agreement is indefinite except that it is to be a minimum of 6 months after the termination of any Supplement. Default term of Supplements is one year from execution date of each Supplement unless Supplement provides otherwise. Signed in 2004.

Document 2.5: Master Services Agreement by large U.S.-based software company, with large Indian service provider, for development of software application for a particular industry. U.S.-based subsidiary of service provider was to be a party, as well as Indian parent company. Details of specific services to be worked out in separate Statements of Work. Term was to be for 5 years, with automatic extensions unless customer decides against continuing. This contract was ultimately not signed because U.S.-based customer became concerned that the deal would help create a new competitor.

Document 2.6: Master Services Agreement by large consumer electronics and communications company, with Scandinavian parent company and certain U.S. subsidiaries, for manufacturing of consumer electronics. Manufacturing was to be done in an Eastern European facility. Details of services and production to be specified in Work Orders and Statements of Work. Service provider may subcontract work only as specifically agreed by customer. Term of agreement was redacted. Signed in 2004.