THE SPACE BETWEEN MARKETS AND HIERARCHIES

George S. Geis[*]

[*] Professor of Law, The University of Virginia School of Law; Visiting Professor, The Indian School of Business, Hyderabad, India. Thanks to Jayne Barnard, Margaret Blair, Mercer Bullard, Albert Choi, Ben Cooper, Eric Kades, Jody Kraus, Jennifer Hill, Rich Hynes, Kevin Kordana, Paul Mahoney, Greg Mitchell, Erin O'Hara, Mark Ramseyer, Barak Richman, Randall Thomas, George Triantis, and J. Hoult (Rip) Verkerke for helpful conversations and comments on this topic. I am also grateful for feedback and suggestions received during presentations of this Article at The University of Mississippi School of Law, Vanderbilt University Law School, The University of Virginia School of Law, The College of William and Mary Marshall-Wythe School of Law, and the 2007 International Corporate Governance Conference at Vanderbilt University Law School.

INTRODUCTION

RELOCATING economic production is nothing new, and companies have continually sought to move business activity to areas with cheaper labor markets as transportation costs drop. Yet over the past decade there has been a notable increase in the willingness of firms to cast their supply chains beyond the boundaries of the United States.[1] For manufacturing firms, passage of the North American Free Trade Agreement ("NAFTA") in 1994 represented a major watershed. High profile companies quickly shifted portions of their work to Mexican "maquiladoras," labor-intensive assembly operations located just over the border.[2] And China has emerged, of course, as a world manufacturing center through its tax-advantaged economic zones and shockingly low labor rates.[3]

On the services side of the economy, a 2005 study projected the migration of 4.1 million jobs (by 2008) from developed economies to places like India, Vietnam, Brazil, and the Philippines.[4] India, in particular, has attracted notice for its rapid growth in information technology and other sophisticated outsourcing services[5]—

[1] It is worth noting that these developments can have significant macroeconomic repercussions and social implications, but this paper does not take on these difficult issues. Rather, it concentrates exclusively on the microeconomic, firm-level decisions related to offshoring and outsourcing (for a description of how these specific terms are used to describe different types of economic activity, see infra Section II.A).

[2] During the first five years after the passage of NAFTA, maquila employment grew by an estimated eighty-six percent. Richard H.K. Vietor & Alexander Veytsman, American Outsourcing, Harv. Bus. School, Pub. No. 9-705-037, at 3–6 (2007). Similarly, the number of maquila plants ballooned from roughly 2700 in 1997 to 3700 in 2001. Id. at 4.

[3] Id. at 7–9.

[4] Diana Farrell, et. al., McKinsey Global Institute, Part 1—The Demand for Offshore Talent in Services, *in* The Emerging Global Labor Market 18 (2005), http://www.mckinsey.com/mgi/reports/pdfs/emerginggloballabormarket/part1/MGI_demand_synthesis.pdf.

[5] See, e.g., The Next Wave: India's IT and Remote-Service Industries Just Keep on Growing, The Economist, Dec. 17, 2005, at 57, 57. According to India's National Association of Software and Service Companies ("NASSCOM"), technology and outsourcing-services revenue increased by nearly a third (to almost $40 billion) during

including financial analysis, medical imaging, and drug discovery. And this may only be the beginning of a longer trend. According to one estimate, nearly 160 million jobs in the service economy—about eleven percent of worldwide service jobs—could theoretically be performed anywhere in the world.[6] Nobody expects this many positions to move overseas, but analysts do project the size of the total offshoring market to continue its extraordinary ascent.[7]

What, then, is causing firms to embrace global supply chains? Why are they increasingly turning to foreign production as a strategy for bringing goods and services to market? The conventional answer is that offshoring is just part of a never-ending quest for lower production costs via labor arbitrage. And indeed, the economics of change can be compelling when improved communication and transportation networks open new opportunities to hire workers for one-tenth the price of those in more developed countries.

But there is more to this story. Firms are also starting to pursue some intriguing contractual approaches—where assets are legally owned by an offshore vendor, but the use of these assets is subject to partial control rights retained by the onshore client.[8] Under

the fiscal year ending in March 2007. Pui-Wing Tam & Jackie Range, Some in Silicon Valley Begin to Sour on India, Wall St. J., July 3, 2007, at A1.

[6] See Farrell et al., supra note 4, at 11. The analysts at McKinsey estimate this figure by examining business activity in eight industry sectors and extrapolating these results to the entire services economy. Id. at 5–6. The report does not suggest, however, that the actual number of jobs outsourced will come anywhere close to 160 million, citing a wide variety of industrial, organizational, regulatory, and social factors that will significantly limit this number. Id. at 23–29.

[7] See, e.g., National Association of Software and Service Companies, Strategic Review 2007, available at http://www.nasscom.in/Nasscom/templates/NormalPage.aspx?id=50856 (estimating a strong liklihood that offshored services will reach $60 billion by 2010). A large collection of reports and statistics related to the growth of offshore outsourcing can also be found at Real-Time Technology Solutions, Statistics Related to Offshore Outsourcing, (Nov. 20, 2007), http://www.rttsweb.com/outsourcing/statistics/. The prognosis for outsourcing is not inevitably positive, however, especially as wages continue to rise in some parts of India. See Tam & Range, supra note 5, at A1 (reporting on a reversal of IT offshoring in some parts of Silicon Valley); Deloitte Consulting, Calling a Change in the Outsourcing Market: The Realities for the World's Largest Organizations (2005), available at http://www.deloitte.com/dtt/cda/doc/content/us_outsourcing_callingachange.pdf (warning that outsourcing is not working for many firms and that growth is likely to wane).

[8] There is nothing particularly special, of course, about the international component of these transactions; they could occur just as easily in Houston as in Hyderabad (and

these hybrid arrangements, each firm accepts some operational risks (presumably those which it can best manage through economies of scale, diversification, or other means), while other risks are shed to a counterparty. Likewise, complex outsourcing deals can involve intermediate levels of capital investment, commitment, and reward.

In this Article I will advance two claims—one theoretical, and the other exploratory. First, I will make a theoretical argument that offshore outsourcing (along with other hybrid structures) can serve as a sensible governance compromise between the traditional extremes of markets and hierarchies.[9] This is true for four general reasons. First, it allows firms to reintroduce some of the market pressure on input prices that is lost with exclusive corporate ownership. Second, hybrid outsourcing can guard against some of the hold-up concerns plaguing relation-specific investment in pure market transactions—by carving out control rights in enumerated areas. Third, it can reduce the agency cost distortions that arise when an investor's assets are controlled by firm managers. And finally, it can facilitate more granular capital structures, where financing incentives are better matched to the underlying characteristics of asset clusters. Of course there are tradeoffs here, and more traditional approaches to economic organization also have their place.

The second goal of this paper is to raise the possibility that we are moving toward an increasingly complete array of operational

undoubtedly do). Yet the vanguard of this trend seems to be mustering overseas, and I will focus much of the discussion here.

[9] For a discussion of the foundational literature on markets versus hierarchies, see infra Section I.A. The possibility of hybrid compromise has been raised elsewhere, of course—primarily in the management literature on business alliances and in the economic and marketing literature on "make-or-buy" sourcing decisions. See, e.g., Robert J. David & Shin-Kap Han, A Systematic Assessment of the Empirical Support for Transaction Cost Economics, 25 Strategic Mgmt. J. 39 (2004) (reviewing management work in this area); Aric Rindfleisch & Jan B. Heide, Transaction Cost Analysis: Past, Present, and Future Applications, J. Marketing, Oct. 1997, at 30 (1997) (reviewing marketing work in this area). I discuss some of this literature's problem areas infra Section I.D. Moreover, recent insights linking the borders of a firm to legal considerations impacting capital structure makes it worthwhile to reconsider the theoretical benefits of hybrid organizational entities under this paradigm. See, e.g., Edward M. Iacobucci & George G. Triantis, Economic and Legal Boundaries of the Firm, 93 Va. L. Rev. 515, 564 (2007) (raising the possibility that intermediate organizational structures might be efficient compromises in light of a capital structure theory of the firm).

alternatives as falling transaction costs press organizational contracting to its theoretical limits. Indeed, these developments in organizational contracting might be seen as paralleling the recent revolution in corporate finance, which has allowed firms a wider variety of funding alternatives through the use of derivatives, insurance, syndication, and other innovations.[10] In a nutshell, I ponder whether this sort of transformation—from discrete to continuous options for slicing ownership, control, commitment, and risk—may be taking place on the left side of the balance sheet as well as on the right.[11]

An example might help to illustrate the organizational importance of business outsourcing. Consider a strategic dilemma faced by Wachovia Bank near the end of 2005. The North Carolina firm had grown rapidly into one of America's major financial institutions, largely through a strategy of acquiring rivals.[12] Yet it had long resisted any attempt to cut operating costs by moving its banking activity overseas.[13] Eventually, however, Wachovia realized that it

[10] Recent work in the legal academy has considered the effect of these innovations (combined with improvements in risk management), especially in relation to the use of private-equity backed leveraged buyouts or other strategies for recapitalizing or securing new capital. See, e.g., Ronald J. Gilson & Charles K. Whitehead, Deconstructing Equity: Public Ownership, Agency Costs, and Complete Capital Markets, 108 Colum. L. Rev. 231, (2009) (discussing the development of complete capital markets and arguing that diversified equity holders may not always constitute the cheapest source of capital); Henry T.C. Hu & Bernard S. Black, The New Vote Buying: Empty Voting and Hidden (Morphable) Ownership, 79 S. Cal. L. Rev. 811, 888–91 (2006) (exploring the use of derivative instruments to separate voting rights from equity ownership); Henry T.C. Hu & Bernard Black, Equity and Debt Decoupling and Empty Voting II: Importance and Extensions, 156 U. Pa. L. Rev. 625 (2008) (extending their earlier work); Frank Partnoy & David A. Skeel, Jr., The Promise and Perils of Credit Derivatives, 75 U. Cin. L. Rev. 1019, 1023–24 (2007) (describing the rise of new financial products allowing credit holders to share risk). Of course, as recent events prove, these financing innovations also make it easier to amplify risk for firms inclined to pursue such a strategy.

[11] For a brief discussion of which transactions impact the left or right side of the balance sheet, see infra note 23 and accompanying text.

[12] See, e.g., A Golden Handshake, Economist.com, May 9, 2006, http://www.economist.com/agenda/displaystory.cfm?story_id=E1_GJDGTSV&CFID=21441559&CFTOKEN=84451471; see also American Banks: With Open ARMs, The Economist, May 13, 2006, at 84 (describing Wachovia's acquisition strategy).

[13] See Dean Foust, Online Extra: Wachovia's Change of Heart, Business Week, Jan. 30, 2006, http://www.businessweek.com/magazine/content/06_05/b3969422.htm.

was lagging behind competitors, and the firm decided to send part of its back-office work to India.[14]

The conventional way to structure this sort of project, at least in the financial services industry, was to establish a captive international business that would serve, in effect, as a legally-owned division of Wachovia. This is exactly how most other banks had made their passage to India.[15] Yet Wachovia recognized that this sort of strategy was unlikely to provide the cheapest cost structure. Among other things, the firm enjoyed no brand recognition in India and would need to pay relatively higher salaries to attract suitable workers away from firms like Infosys, Wipro, or TCS.[16] More generally, a captive structure would shelter ongoing work from competitive market pressures (because the in-house unit typically enjoys a guaranteed sale) in a way that independent relationships would not. Further, it would expose Wachovia's investors to incremental abuses, as managers in far-removed Bangalore might use private information to line their pockets, lighten their workload, or assume unwarranted risks.[17]

Wachovia also considered a second organizational strategy: putting its projects up for bid among a dozen or so prominent outsourcing vendors. Indeed, this is exactly what it did for some work in information technology and human resources.[18] Yet the bank was reluctant to follow this path for especially sensitive parts of the value chain; jettisoning the work completely might sever Wachovia's control over its back-office operations and expose the firm to new risks related to customer privacy, intellectual property leakage, or other breakdowns. And it would be more dangerous to invest heavily in connecting domestic operations to these back-office centers because the vendor might seek to extort higher prices later during renegotiations.

[14] Id.
[15] Id.
[16] Id.
[17] More subtly, there was conceivably a capital structure mismatch between the overall financing of Wachovia (which would presumably be used to fund a captive venture) and the optimal capital structure for the Indian assets. See infra Subsection II.C.4.
[18] The information technology work was awarded to Infosys Technologies and Cognizant Technologies; the human resources work was outsourced to Hewitt Associates. Foust, supra note 13.

Wachovia ultimately struck a hybrid deal with a firm named Genpact, an outsourcing vendor recently spun-off from General Electric.[19] The parties agreed that Genpact would take legal ownership of the real estate, computer servers, human capital, and other assets needed to perform Wachovia's back-office services. But, importantly, Wachovia carved out broad areas of control related to the manner in which this work would be conducted. The bank retained the power, for example, to hire and fire key managers running this division and to set procedures for critical operations.[20] It also received a dedicated building with a security system barring other Genpact employees from using these facilities.[21] And it insisted on a long-term contract.[22]

Technically, this sort of arrangement still falls outside the legal boundaries of a firm. Practically, however, it falls somewhere in between a spot transaction and captive ownership. This paper argues that these hybrid structures can sometimes serve as a sensible governance compromise when a firm decides where to erect its borders.

The discussion in this Article is organized as follows. Part I will set the stage by briefly reviewing foundational work conceptualizing the firm—including recent research showing how capital structure design relates to the location of a firm's legal borders. It will also discuss the historical study of hybrid organizational forms, and conclude that the product of this work has been somewhat disap-

[19] See If in Doubt, Farm it Out *in* A Survey of Business in India, The Economist, June 3, 2006, at 7. The Genpact story also presents interesting considerations related to the theory of the firm. Established as an early provider of offshore services in India to General Electric, Genpact was spun off from that firm in 2005 to unlock new growth opportunities. See. e.g., Moumita Bakshi Chatterjee, Genpact Eyes Buy in US, UK, Hindu Bus. Line Internet Edition, Jan. 11, 2006, http://www.thehindubusinessline.com/2006/01/12/stories/2006011202260400.htm. Genpact went public in 2007 on the New York Stock Exchange under the coveted symbol "G." Steve Gelsi, Genpact Marks Fourth Richest IPO of the Summer, MarketWatch, Aug. 2, 2007, http://www.marketwatch.com/news/story/genpact-marks-fourth-richest-ipo/story.aspx?guid=%7BE3071DE0%2D3774%2D4442%2DBF0E%2D25315BD44BD8%7D.

[20] If in Doubt, Farm it Out, supra note 19, at 7; Confidential Interview with Anonymous Executive, Genpact, in Hyberabad, India (Dec. 27, 2006).

[21] Confidential Interview, supra note 20.

[22] The initial contract ran for seven years. Press Release, Wachovia and Genpact, Wachovia and Genpact Announce Outsourcing Agreement (Nov. 30, 2005), available at http://www.wachovia.com/inside/page/0,,134_307%5E1280,00.html.

pointing. Part II will turn to the rise of business outsourcing and the theoretical benefits of using complex contracting to finesse governance tensions underlying intra-firm activity. Part III will explore how future developments along this trend line might lead to an increasingly complete array of organizational options and will offer some preliminary thoughts about what greater use of this space between markets and hierarchies would mean for the management and legal apportionment of economic activity. A brief conclusion will summarize the Article.

I. CONCEPTUALIZING THE FIRM: A THEORETICAL BACKGROUND

Despite the complexity surrounding many modern corporations, it is still possible to envision any firm as a basic collection of inputs and outputs. Every company, from those selling shoes and staplers to those designing drugs and derivatives, accepts capital inputs from investors and uses this cash to purchase physical or intangible assets (including labor). The company then deploys these assets against a business model in the pursuit of incremental value. The yin and yang of these financing and operating decisions are reflected, of course, in a firm's financial statements: debt and equity investments are tallied on the right side of the balance sheet, while operational uses of this money appear on the left.[23]

Yet this basic accounting framework tells us little about how a firm's owners, directors, and managers determine the size of their organization. What are the advantages of stuffing cash and assets into a corporate behemoth? What are the drawbacks? Is it better to operate as a nimble firm by stitching together a virtual value chain with only the thinnest veneer of corporate ownership? The optimal strategy is hardly obvious; even in the same industry, dwarves often compete with giants. Therefore, in order to set the stage for the rest of the paper, it is necessary to briefly review three different approaches for conceptualizing a firm: transaction cost theories, agency cost theories, and capital structure theories.[24]

[23] This is true, of course, primarily for longer-term changes to operations. Information on a firm's short-term operating activities is typically reflected in other financial statements. Moreover, financial reporting does not necessarily reflect a firm's full economic position, as some assets or liabilities may be kept "off balance sheet."

[24] These three approaches have been quite influential in the economic and legal scholarship, but it is important to note that they are not the only ways to understand

A. Transaction Cost Theories

Imagine, as a useful starting exercise, that a new firm has a large pot of cash sitting on the boardroom table—along with a foolproof business plan. It must now decide the best way to secure the various inputs needed to transform raw materials (broadly defined) into higher value outputs. Should it purchase and own these assets under the firm's capacity as a legal person? Or should it strike arm's length contracts on the open market for the necessary goods and services?

This fundamental choice about the best way to legally compartmentalize asset ownership is the jumping off point for transaction cost theories of the firm. Ronald Coase's seminal paper on the topic framed the inquiry by asserting that external contracts should trump firm ownership—at least in an idealized world with competitive markets and zero transaction costs.[25] Essentially, the argument is that sourcing any given activity internally shields production from the pressures of the marketplace, eliminating the constant threat of losing a sale to competitors and decreasing incentives to create new efficiencies. But commercial exchange is not frictionless, of course, and Coase hypothesized that firms may sensibly incur slightly higher production costs[26] in order to avoid some of the costs associated with external contracting.[27]

He was a little unclear, however, on the exact nature of these transaction costs, and much of the work in this area seeks to flesh out a more compelling narrative. The literature here is vast, and I will only sketch a few highlights.[28] First, an obvious category of

the benefits of operating within a firm. For instance, recent scholarship has explained the rise of the corporate entity as a legal mechanism that allows joint owners (shareholders) to "lock-in" or commit assets to a venture without facing a risk that their co-owners will behave opportunistically. See Margaret M. Blair & Lynn A. Stout, A Team Production Theory of Corporate Law, 85 Va. L. Rev. 247, 272–74 (1999); Margaret M. Blair, Locking In Capital: What Corporate Law Achieved for Business Organizers in the Nineteenth Century, 51 UCLA L. Rev. 387, 433–34 (2003).

[25] See R.H. Coase, The Nature of the Firm, 4 Economica 386, 388–92 (1937).

[26] External production costs may dwarf internal production costs for a variety of reasons including economies of scale, economies of scope, and superior vendor capabilities for a given activity.

[27] Coase, supra note 25, at 391.

[28] For a helpful review of scholarship in this area through 1999, see generally Nicolai J. Foss, et. al., The Theory of the Firm, *in* 3 Encyclopedia of Law and Economics 631 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000). Oliver Williamson has signifi-

transaction costs comes with the need to negotiate and memorialize the terms of any agreement: purchasing managers and corporate attorneys demand payment for their efforts. Yet this explanation is not entirely satisfying because firms must also incur administrative costs with internal firm production, as managers work to negotiate transfer pricing formulas and harmonize production schedules.[29] Anyone who has tried to navigate the shoals of a large corporate bureaucracy is familiar with these hazards. Thus, it is hardly self-evident that the costs of external negotiation are worse than the politics of internal coordination—though the relative difference in these burdens could still provide a plausible rationale for the location of some economic activity.

A second, and more nuanced, understanding of contractual transaction costs involves relation-specific investments. The general idea here is that some assets can be fairly understood to have a high value for one firm—typically because that user can combine the good with other specialized inputs—while the same assets are worth less to everyone else.[30] A maker of aluminum cans, for example, might wish to source molten aluminum from the neighboring smelter to minimize transportation costs and generate other efficiencies.[31] Other users may derive less benefit from geographic

cantly expanded upon Coase's initial insight by discussing the importance of bundling relationship-specific assets into a firm to avoid counterparty opportunism, and, more generally, by showing how a proper conception of transaction costs should include both the direct costs of managing relationships and the opportunity costs of suboptimal governance decisions. See Oliver E. Williamson, The Economic Institutions of Capitalism: Firms, Markets, and Relational Contracting (1985) [hereinafter Economic Institutions]; Oliver E. Williamson, Markets and Hierarchies (1975); Oliver E. Williamson, The Mechanisms of Governance (1996) [hereinafter Mechanisms].

[29] In an ideal world, a firm might use transfer pricing to replicate market forces. But as transfer prices are typically determined through accounting exercises, and not via open exposure to market supply and demand curves, this sort of analytics often fails to duplicate market pressures. See, e.g., Robert G. Eccles, The Transfer Pricing Problem: A Theory for Practice (1985) (discussing the wide variety of transfer pricing practices used by firms, especially the frequent use of mandatory internal transfers that undermine free market forces).

[30] See Mechanisms, supra note 28, at 105–06.

[31] For instance, with a nearby smelter, the can maker might be able to avoid constructing an ingot re-melting facility by transporting liquid aluminum (which hardens after a short period of time) directly to its manufacturing molds. See, e.g., Victor Goldberg, Framing Contract Law 350 (2006) (describing litigation involving a contractual relationship along these lines). Other users of hardened aluminum may not enjoy such a benefit.

proximity. The problem, of course, is that the smelter may demand higher prices from the can maker—after construction of the can plant is finished—in order to expropriate some of the value from this relation-specific investment. And recognizing this risk, firms may even decide to forgo fruitful investments by replacing uniquely tailored assets with more general ones.[32]

One obvious way to mitigate this "hold-up" problem is to write a long-term supply contract at a fixed (or indexed) price. Indeed, protecting relation-specific investments is commonly touted as a fundamental justification for legally empowering parties to bind themselves via contract.[33] Yet unforeseen or remote contingencies may prevent a party from anticipating, and securing contractual protection against, every variety of opportunistic renegotiation. As the familiar refrain goes, it is impossible to document all conceivable future states of the world, and low-probability events may resurrect the hold-up problem when parties fail to plan for these contingencies.[34] In short, the ever-present risk that contractual counterparties will find some way to suck all the value out of relation-specific investments magnifies the bite of market exchange.

The alternative solution, of course, is simply to vertically integrate complimentary assets into one legal organization. There is no need to worry about obscure contractual contingencies when the can maker owns the smelter. Firms can simply reserve decisions about how to deploy these assets over time and retain the managerial hierarchy needed to eke out all future benefits from complementarity. More robust theories have been built upon this theoretical cornerstone—such as the "property rights" theory of

[32] Continuing the example, the can manufacturer may just decide to build the aluminum re-melting facilities after all, even though this would lead to less efficient operations.

[33] See, e.g., Alan Schwartz & Robert E. Scott, Contract Theory and the Limits of Contract Law, 113 Yale L.J. 541, 559–62 (2003) (describing the important role of contract law in enabling parties to make relation-specific investments).

[34] For a discussion of why gaps are left in contracts, see generally Robert Cooter & Thomas Ulen, Law and Economics 218–19 (5th ed. 2008); Oliver Hart & John Moore, Incomplete Contracts and Renegotiation, 56 Econometrica 755 (1988); Schwartz & Scott, supra note 33, at 594–95 (arguing that the desire of parties to condition their obligations will lead contracts to be incomplete); Steven Shavell, Foundations of Economic Analysis of Law 299–301 (2004); Oliver Hart & John Moore, Incomplete Contracts and Renegotiation, 56 Econometrica 755 (1988).

economic organization,[35] or frameworks exploring the use of specialized human capital within a firm.[36] Yet all of this work shares the common insight that aggregating production into one legal entity can protect against the hold-up problem inherent with relation-specific assets. The optimal location of a firm's borders, then, is thought to be the result of balancing these benefits against the greater production costs that must be incurred when the activity is shielded from direct market pressure.[37]

B. Agency Cost Theories

The agency cost problem is fundamentally a bad news story—all clouds, with no silver lining. The heart of the dilemma comes from a simple truth: it is expensive (and ultimately impossible) to prevent parties from taking self-interested actions when they are given control over other people's money.[38] These distortions arise through information asymmetries between the principal and agent.[39] In other words, if a principal could freely observe and un-

[35] See Sanford J. Grossman & Oliver D. Hart, The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration, 94 J. Pol. Econ. 691, 691–93 (1986); Oliver Hart & John Moore, Property Rights and the Nature of the Firm, 98 J. Pol. Econ. 1119, 1120–24 (1990) (developing an analytical model for property rights theory of economic organization).

[36] Raghuram G. Rajan & Luigi Zingales, Power in a Theory of the Firm, 113 Q. J. Econ. 387, 387–91 (1998) (extending this theory to include intangible assets, such as human capital).

[37] A robust collection of empirical work seeks to test these theories by linking an industry's dependence on specialized assets to the organizational structures observed within that industry. I discuss the basic goals, successes, and limits of this work infra Section I.D.

[38] The agency cost problem has been discussed extensively in the legal and economic literature. The foundation for much of this work can be found in Adolf A. Berle, Jr., & Gardiner C. Means, The Modern Corporation and Private Property (Special ed., The Legal Classics Library 1993) (1932); Michael C. Jensen & William H. Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. Fin. Econ. 305 (1976). For additional background on agency theory, see Kenneth J. Arrow, The Economics of Agency, in Principals and Agents: The Structure of Business 37 (John W. Pratt & Richard J. Zeckhauser eds., 1985); Kathleen M. Eisenhardt, Agency Theory: An Assessment and Review, 14 Acad. Mgmt. Rev. 57 (1989); Eugene F. Fama, Agency Problems and the Theory of the Firm, 88 J. Pol. Econ. 288 (1980); and Sanford J. Grossman & Oliver D. Hart, An Analysis of the Principal-Agent Problem, 51 Econometrica 7 (1983).

[39] These asymmetries are sometimes divided between the "hidden action" and the "hidden information" of an agent. See, e.g., Arrow, supra note 38, at 38–39.

derstand how an agent's actions impacted her wealth, then the agent would have no reason to behave differently than the principal would when faced with the same circumstances. But a principal cannot read the mind of her agent, of course, and it is often difficult to know whether bad (or good) outcomes are caused by acts of the agent or by external factors beyond everyone's influence.[40]

Concealed by this cloud of uncertainty, an agent may engage in a variety of undesirable actions—in essence, running up an expensive (and hidden) tab that is ultimately sent to the principal's table. The agent may, for instance, spend time on easy tasks instead of taking on difficult, but more important, ones.[41] He may stuff his pockets with hidden compensation and other perks.[42] Or he may make decisions that are personally optimal, but counter to those that a fully informed principal would prefer.[43] A principal will generally be aware of these distorted incentives, of course, and may invest in monitoring activities to guard against malfeasance. Yet monitoring is itself costly and unlikely to prevent every abuse; furthermore, a proper tally of agency costs must also include these incremental outlays.[44]

In the context of a firm, the typical focus for agency problems is the relationship between investor and manager. The shareholders, as capital contributors and residual owners, are viewed as principals, and the managers, enjoying discretion over most decisions, are seen as agents.[45] Importing the agency framework in this man-

[40] See Jean Tirole, The Theory of Corporate Finance 17–20 (2006) (outlining forms of dysfunctional governance that thwart principals' ability to observe agents' misbehavior).

[41] Id. at 16 (describing this sort of suboptimal task allocation, rather than insufficient work hours or time wasted on YouTube, as the primary manifestation of shirking).

[42] Id. at 17.

[43] These inefficient decisions typically stem from a mismatch between the risk profiles of agent and principal. For example, an agent may take too little risk with his principal's property by making overly safe decisions that preserve the agent's job. Alternatively, he may take on too much risk by "gambl[ing] for resurrection" in hard times. Id. at 17; see also Barry E. Adler, A Re-Examination of Near-Bankruptcy Investment Incentives, 62 U. Chi. L. Rev. 575, 576 (1995) (arguing that managers "have a strong incentive to gamble with the firm's assets" in times of financial distress).

[44] See Jensen & Meckling, supra note 38, at 308 (defining agency costs as the sum of the principal's monitoring costs, the agent's bonding costs, and the residual loss measured as the "dollar equivalent of the reduction in welfare experienced by the principal" as a result of divergent agent interests).

[45] Id. at 309.

ner is a bit artificial since there may be other parties, such as debt investors or trade creditors, who also maintain an ownership stake (though generally not a residual one, unless the firm becomes financially distressed).[46] Nevertheless, agency theories do seem to have some explanatory and predictive power over the inner workings and governance of a corporation.[47]

Viewed in this manner, agency costs offer another reason to avoid centralizing economic activity within a firm. Large and complicated corporations harbor plenty of dark corners, and managers have incentives to use this information asymmetry to take advantage of equity owners. These problems are compounded when economic ownership of corporate assets is split among a diffuse population of shareholders—who may find it difficult to coordinate monitoring defenses.[48] By contrast, agency costs can conceivably be reduced if the same assets are divided into many discrete firms, each run by an owner-manager.[49] Any comprehensive accounting of the costs and benefits of consolidated firm activity must therefore include the drag of agency distortions. In short, these undesirable incentives act as a toll on the centralization of economic activity and, all else being equal, tilt production towards the use of market transactions.[50]

Because the agency cost problem is thought to be especially acute between shareholders and managers, one strategy for mitigating these distortions might be to tinker with a firm's capital structure. Or, said differently, pressing the agency cost theory of

[46] See, e.g., Douglas G. Baird & Robert K Rasmussen, Private Debt and the Missing Lever of Corporate Governance, 154 U. Pa. L. Rev. 1209 (2006) (focusing on the ownership and governance role of debt investors).

[47] For example, the range of governance topics discussed under the rubric of agency theory includes hostile takeovers, proxy fights, share blockholding, independent directors, disclosure requirements, and so on. See, e.g., Tirole, supra note 40, at 17.

[48] See, e.g., Bernard S. Black, Shareholder Passivity Reexamined, 89 Mich. L. Rev. 520, 522, 567 (1990); Edward B. Rock, The Logic and (Uncertain) Significance of Institutional Shareholder Activism, 79 Geo. L.J. 445, 453–63 (1991).

[49] It is worth noting that the agency cost problem does not disappear when firm activity is replaced by a long term contract. A promisor-agent may still take actions that are inconsistent with the desires of a promisee-principal. See Jensen & Meckling, supra note 38, at 310, 333–34. But the narrower scope of discretion, along with the reduced complexity of operational activity, may lessen the magnitude of agency risk.

[50] It is again worth emphasizing that contractual transactions may also suffer from agency distortions.

the firm to its logical conclusion suggests that the use of public equity may ultimately be inferior to other financing structures that avoid such a wide gulf between managerial incentives and residual owner payoffs. Michael Jensen famously predicted as much in the 1980s, arguing that "the publicly held corporation . . . has outlived its usefulness in many sectors of the economy and is being eclipsed" by the use of public and private debt.[51] This provocative statement was somewhat ahead of its time, but recent recapitalizations have indeed turned to more leveraged capital structures—typically via private equity buyouts—in order to replace the agency costs of public equity with contractual debt.[52] These new financing structures are not perfect—and they can mutate into additional strains of the agency cost problem[53]—but the general notion of substituting debt for public equity to cut agency costs maintains some appeal.

But no matter where firms obtain their capital, they do not create value by sitting on large piles of cash like Scrooge McDuck. It is what they choose to do with this capital, typically in combination with labor inputs, that generates incremental wealth. In other words, the operating decision cannot be fully divorced from the financing decision—they are two sides of the same coin (or, more accurately, the same T account). Recent work in the legal academy

[51] Michael C. Jensen, Eclipse of the Public Corporation, Harv. Bus. Rev., Sept.–Oct. 1989, at 61, 61 (revised 1997), available at http://ssrn.com/abstract=146149.

[52] Lenders will still suffer from the agency cost problem, of course, because managers enjoy control over many decisions that affect the borrowed funds (and thus the ability to repay). See Jensen & Meckling, supra note 38, at 333–34. Yet lenders are theoretically exposed to a narrower slice of agency risk because they can use contractual provisions (such as line-of-business covenants or financial ratio requirements) to mitigate the scope of distortions. Ongoing contractual obligations to repay debt (whether through amortized payment schedules, or, more starkly, through sinking fund provisions) can also act to muffle agency risk.

[53] Michael Jensen, for example, has famously reversed course, arguing that the economic structure of private equity investing has mutated into a different sort of agency monster that suffers from new distortions caused by principal-investors handing over their money to agent-fund managers. In essence, the distortions are pushed up one level, as private equity partners use special dividends, consulting fees, deal-completion commissions, and other dubious practices to extract private rents. Indeed, Jensen has predicted that there will soon be a high-level scandal in the private equity industry—a scandal analogous to the Enron or WorldCom fiascos. See, e.g., Gretchen Morgenson, It's Just a Matter of Equity, N.Y. Times, Sept. 16, 2007, Sunday Business, at 1.

has seized on the importance of this holistic approach to argue that the borders of a firm might logically be related to an efficient match between various operating assets and the underlying capital that funds these assets. Let me turn now to discuss this capital structure theory of the firm.

C. Capital Structure Theories

1. The Link Between Asset Characteristics and Capital Structure

Historically, the biggest financing decision facing a firm has been whether to line its coffers with debt or equity. Issuing debt allows the firm to raise money without sacrificing residual control rights.[54] The price of this discretion is an ironclad repayment schedule, fixed in contract law, and perhaps a security interest in some of the firm's assets. Issuing equity, on the other hand, offers greater flexibility on the repayment terms; managers are free to stash all of the proceeds within the firm for years before returning profits to equity investors through dividends or share buybacks. The tradeoff, of course, is that shareholders become residual owners of the firm and will earn a say in major operating decisions.[55] And despite the Nobel Prize-winning theories on capital structure irrelevance,[56] firms pay serious attention to the optimal balance between debt and equity.[57]

[54] Of course creditors will typically negotiate for contractual covenants placing some boundaries on managerial discretion, either by affirmatively mandating some activities (such as financial reporting) or negatively prohibiting other ones (such as investing the money outside current lines of business). In good times these covenants may not matter much. But they can pose more meaningful implications for corporate governance if a firm starts to falter. See Baird & Rasmussen, supra note 46 (examining the role of creditors and elaborate financial covenants in corporate governance decisions).

[55] Most day-to-day decisions are delegated to managers and directors—leaving shareholders with a direct vote on only a few extraordinary matters. For this reason, the practical extent of shareholder control comes mostly via representation.

[56] See Franco Modigliani & Merton H. Miller, The Cost of Capital, Corporation Finance and the Theory of Investment, 48 Am. Econ. Rev. 261 (1958) (setting out two of their famous and provocative propositions that a firm's capital structure will not generate incremental value—under certain, stylized assumptions); Peter H. Huang & Michael S. Knoll, Corporate Finance, Corporate Law and Finance Theory, 74 S. Cal. L. Rev. 175, 177–78 (2000) (arguing that the real benefits of the M&M theorem for corporate law scholars come from relaxing its simplifying assumptions one by one).

[57] See, e.g., Howell E. Jackson et al., Analytical Methods for Lawyers 232 (2003) ("[S]ubsequent writers (including Modigliani and Miller themselves) have argued . . .

In fact, any comprehensive understanding of a firm's capital structure needs to go beyond the initial weighting of debt versus equity. Corporate finance scholars are not only concerned with the ideal amount of leverage; they also study the contractual strings that come attached to this money—strings like business line covenants, conversion rights, cross-default clauses, and repayment provisions.[58] Similarly, a full understanding of the terms underlying any equity investment should include governance provisions such as director voting rules, class preferences, and antitakeover defenses. In this manner, capital structure theory might be better viewed as an exercise in optimal contract design.[59]

How, then, should a firm elect to raise its money? The answer is quite complicated, but it is worth noting at the outset that firms do not simply pursue investors as a form of sport: they need funds in order to pay for the projects used to transform raw materials into higher value outputs. In other words, checks written by the Chief Operating Officer must be paid for by the Chief Financial Officer. And, importantly, the determinants of an efficient capital structure will often depend on the nature of these assets (along with a host of other considerations, such as current economic conditions and tax, corporate, bankruptcy, and securities laws). The optimal capital structure may therefore vary by industry. To be sure, any group of assets can conceivably be financed with any sort of investment, but, like drinking a heavy Bordeaux with a light sole, something may be lost through a bad pairing.

What features of an asset will determine its ideal capital structure? The literature on this topic is vast, and I will not attempt to discuss every consideration in detail. But it seems that an efficient match will depend on at least three different factors: (1) the trans-

that the choice of capital structure makes a difference in firm value because a number of the simplifying assumptions in the original article are not true in reality."). The decision is also complicated by the availability of intermediate instruments, such as preferred stock or convertible debt, to parcel out control and cash-flow rights in a more nuanced manner. See, e.g., Alexander J. Triantis & George G. Triantis, Conversion Rights and the Design of Financial Contracts, 72 Wash. U. L.Q. 1231 (1994) (describing some intermediate financing alternatives). Yet a rigid dichotomy has always remained—at least in the eyes of the law—between contractual debt and residual equity.

[58] See Iacobucci & Triantis, supra note 9, at 543–44.

[59] Id.; see also Oliver Hart, Firms, Contracts, and Financial Structure, 126–51 (1995).

parency of assets, or the ease with which they can be valued and monitored; (2) the liquidity of assets (or of their associated cash flows); and (3) the volatility (or riskiness) of assets.[60]

First, opaque assets, such as those owned by cutting-edge biotechnology firms, may lend themselves to a different type of capital structure than transparent assets with long performance histories.[61] This is primarily due to the fact that the opaque assets foster greater information asymmetries between owner and manager. In other words, investors will be (more) skeptical about a firm's representation that unproven assets are valuable.[62] Financial contracts will, in turn, presumably benefit from stricter governance provisions or repayment devices to mitigate investor discounting related to the claimed value of these securities. A firm with opaque assets may also benefit more from concentrated ownership structures, as well as from the use of private debt or equity markets over public ones.[63] By contrast, we should expect firms with transparent assets to adopt capital structures that are less concerned with these information problems, because they do not need to invest as heavily in mechanisms that convince investors they are telling the truth about the value (and future performance) of their assets.

Second, liquid assets will have different cash flow implications than illiquid assets—providing another possible basis for variation in capital structure optimality. A firm with a pile of gold bars, for instance, may be able to support higher leverage ratios than a firm owning a hard-to-sell factory. The former can simply liquidate a few ingots when times get tough. In addition, an asset that generates regular cash flows will have implications for the agency cost problem, because managers will have more "financial slack" to in-

[60] Iacobucci & Triantis, supra note 9, at 545.

[61] Though a performance history is only relevant to the extent that it helps analysts understand likely future outcomes. As the financial circulars perpetually warn, past performance is no guarantee of future results.

[62] See, e.g., Stewart C. Myers & Nicholas S. Majluf, Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have, 13 J. Fin. Econ. 187, 188 (1984); James C. Spindler, IPO Liability and Entrepreneurial Response, 155 U. Pa. L. Rev. 1187, 1188–91 (2007) (discussing problems with insider proclamations of value).

[63] See, e.g., Douglas W. Diamond, Financial Intermediation and Delegated Monitoring, 51 Rev. Econ. Stud. 393 (1984); Raghuram Rajan & Andrew Winton, Covenants and Collateral as Incentives to Monitor, 50 J. Fin. 1113 (1995).

vest in self-serving projects.[64] More debt may be appropriate, under these circumstances, to tighten this slack via regular interest payments.

Third, risky or volatile assets will likely merit different financing treatment than stable ones. Most obviously, assets that are highly sensitive to exogenous shocks will require more of an equity cushion to shield against the hazards of financial distress.[65] More subtly, managerial agency costs can become exacerbated with volatile assets; it is harder to monitor agents when there is plenty of room to blame undesirable outcomes on the outside world.[66] These assets might therefore be financed more efficiently with governance terms that seek to reduce the information asymmetries between managers and investors. It is also more expensive to take concentrated equity stakes in highly volatile firms because of the difficulty and downside costs to these investors of remaining undiversified.[67] For these and other reasons, it may be more efficient to finance highly volatile assets with lower debt ratios and widely dispersed equity.

This brief discussion only scratches the surface of the work in this area, and other features of an asset may also impact capital structure choices. Furthermore, as mentioned earlier, legal rules governing tax liability, bankruptcy costs, and other corporate obligations should also play a significant role in determining leverage ratios and other capital structure features. My point here is simply that even taking these laws into account, optimal capital structure remains a function of asset type.

2. Intra-Firm Barriers to Capital Structure Granularity

Edward Iacobucci and George Triantis have recently seized upon this asset-dependant nature of capital structure design to ar-

[64] Iacobucci & Triantis, supra note 9, at 548–49.

[65] See, e.g., Dougals G. Baird & Robert K. Rasmussen, The End of Bankruptcy, 55 Stan. L. Rev. 751, 778 (2002) ("Just as modern cars are designed to take account of the possibility that they might crash, modern capital structures are designed with the possibility of financial distress in mind.").

[66] See Edward M. Iacobucci & Ralph A. Winter, Asset Securitization and Asymmetric Information, 34 J. Legal. Stud. 161, 172–74 (2005).

[67] See Harold Demsetz & Kenneth Lehn, The Structure of Corporate Ownership: Causes and Consequences, 93 J. Pol. Econ. 1155, 1158 (1985).

rive at an intriguing explanation for the boundaries of a firm.[68] The key to their argument rests on the fact that capital structure decisions are not tied to individual assets, but must generally be taken at the highest levels of a firm.[69] Debt financing, for instance, permeates an entire corporation. This obviously means that creditors cannot reach assets outside the firm.[70] But they can typically get at *all* assets inside the firm if repayment is not forthcoming. Of course creditors might secure their debt with collateral assets; yet they will still retain the right to enforce repayment beyond these assets.[71] The closest firms can come to asset-specific financing is probably via nonrecourse secured debt, but even this form of lending does not always sever the ability of creditors to garnish other assets.[72] More to the point, governance features on debt—such as covenants to maintain healthy financial ratios or promises to avoid unrelated lines of business—necessarily attach to the firm as a whole, not to individual assets.

Similarly, equity financing is also conducted at a firm-wide level. Shareholders maintain an interest in all of the firm's property, and governance features, like a staggered board of directors or poison pill, are imposed systemically. Relative participation and control rights can be altered, of course, with preferred stock or multiple classes of common stock; but these different classes of shareholders continue to enjoy an undivided interest in all of the firm's assets.[73] Tracking stocks do offer some promise of more granular equity arrangements—as they approximate the partitioning of a firm's as-

[68] Iacobucci & Triantis, supra note 9.

[69] Id. at 518.

[70] This insight forms the basis of Hansmann and Kraakman's work on the benefits of placing diverse assets in different legal entities to capitalize on specialization in monitoring skills. See Henry Hansmann & Reinier Kraakman, The Essential Role of Organization Law, 110 Yale L.J. 387 (2000) (arguing that the primary importance of organizational law is that it allows for "asset partioniong").

[71] Indeed, secured creditors may be entitled to enforce the debtor's personal obligation before demanding repayment from the securitized collateral. See U.C.C. § 9-601(a)(1) (2002); Iacobucci & Triantis, supra note 9, at 529.

[72] This is obviously true if nonrecourse lenders negotiate for contingencies that trigger full recourse. More directly, a number of legal doctrines provide personal debtor liability for fraud, waste, or failure to prudently manage the collateral assets. See Gregory M. Stein, The Scope of the Borrower's Liability in a Nonrecourse Real Estate Loan, 55 Wash. & Lee L. Rev. 1207, 1210–11 (1998); Iacobucci & Triantis, supra note 9, at 529–30.

[73] Iacobucci & Triantis, supra note 9, at 535.

sets by granting shareholders returns based on the performance of a division within the firm. But even these securities are not completely divisible from the rest of a corporation because the holders of tracking stock lack dissolution rights, robust fiduciary protection, and other benefits of equity ownership.[74] Thus for both equity and debt, capital structure decisions must be taken at the very highest levels.

According to Iacobucci and Triantis, the upshot of this legal barrier on granular capital structure design is that firms will be forced to adopt blended capital structures as a compromise approach for financing diverse clusters of internal assets.[75] This is not necessarily a bad thing—firms will sometimes benefit from tax savings,[76] the ability to bear higher leverage ratios,[77] or other conceivable advantages.

Yet it should not be too hard to see how inefficiencies may arise as the result of this forced compromise. Blended capital structures will sometimes generate deadweight loss when compared to an alternative arrangement where heterogeneous assets are split into separately funded firms. Some divisions may suffer from debt covenant restrictions, for example, that are primarily designed to tighten the noose on other clusters of assets. Or one group of assets might conceivably benefit from strong antitakeover defenses,[78] while the rest of a firm's assets would be worth more unburdened by a poison pill.[79] Indeed, any of the variables linking asset charac-

[74] Id. at 536–37; see also Jeffrey J. Haas, Directorial Fiduciary Duties in a Tracking Stock Equity Structure: The Need for a Duty of Fairness, 94 Mich. L. Rev. 2089, 2111–39 (1996) (describing some of the legal and economic limits on the use of tracking stocks to achieve a full partition).

[75] Iacobucci & Triantis, supra note 9, at 545–46.

[76] For example, interest expenses tied to the financing of new assets generating present losses may be used to immediately offset tax liability from mature, profitable assets.

[77] This might be true if assets are uncorrelated in the timing of their cash flows, such that one cluster's gains might be used to support interest payments during another cluster's losses.

[78] Perhaps because these assets are highly susceptible to inefficient takeover bids seeking private gains. Iacobucci & Triantis, supra note 9, at 556–57.

[79] The more general question of whether a poison pill increases or decreases a firm's value is heavily debated. See, e.g., Frank H. Easterbrook & Daniel R. Fischel, The Economic Structure of Corporate Law 168–74 (1991) (arguing that antitakeover defenses, such as a pill, should reduce firm value); John C. Coates IV, Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence, 79 Tex. L. Rev.

teristics to capital structure design might be compromised through a blended structure. Yet because financing must generally be implemented on a firm-wide basis, the only elegant solution to this problem is legal partition.

Anyone setting the borders of a firm may therefore need to include still another set of variables in their algorithms: the extent to which asset clusters are likely to vary in their optimal capital structure parings. In other words, a firm with a fairly homogeneous collection of assets—such as a lumber yard or accounting firm—may be easily matched to its efficient capital structure. By contrast, a firm with more diverse assets may suffer from a suboptimal capital structure by keeping the assets together, instead of splitting them into more granular legal entities. This is not to say, however, that heterogeneous assets should never be assembled within a single firm. It may be quite important to maintain unified ownership in order to avoid other transaction costs, including the hold-up problem.[80] But this mismatch between capital structure and asset characteristics should be considered another potential cost to the legal centralization of economic activity.

In summary, the capital structure theory of the firm might be seen as a union of the concerns posited by the transaction cost and agency cost theories. On the one hand, efforts to protect against the hold-up problem (and other forms of transaction costs) will push toward the intra-firm aggregation of assets. On the other hand, bundling heterogeneous assets into a single legal entity may result in capital structure inefficiencies as owners lose the ability to write the best financing contracts for mitigating agency distortions. Undoubtedly, some large firms will have asset clusters with similar levels of opacity, liquidity, and volatility—and will therefore suffer very little from a blended capital structure. Other firms, however, may find it necessary to own assets that are uncorrelated in these features. These organizations must therefore trade the hold-up problem against the agency cost problem (along with any other distortions arising from blended capital structures) in order to determine exactly where to position their legal borders.

271, 274–77 (2000) (challenging work linking poison pill adoption to a decrease in firm value).

[80] See supra Section I.A.

But this dichotomy between market transactions and firm hierarchies has always been something of an oversimplification. Firms do not just shove economic activity to one side of the line or the other; they have a wide range of hybrid structures with which to conduct their affairs. These include strategies like joint ventures, business alliances, minority equity investments, and franchise agreements. While the exact details of these various mechanisms differ, each offers firms a middle path, strewn with some of the benefits (and costs) of open market transactions and internal ownership. In short, there is space between markets and hierarchies. Of course, I am hardly the first person to make this observation—so let me round out this brief discussion of organizational theory by turning to recent work on hybrid entities.

D. Hybrid Organizational Entities

Foundational research on the theory of the firm accepts that there is room for organizational compromise between arms-length "spot" contracts (on one end of the spectrum) and total firm integration (on the other).[81] But the exact rationale for this compromise—or the key parameters constituting the dividing lines between different "flavors" of hybrid entities—is rarely articulated in much detail. Instead, most of the economic and management research wrestling with hybrid entities takes the form of empirical analysis.

To understand this work, then, it is necessary to step back for a moment and consider the overall empirical project related to "make-or-buy" production decisions.[82] The primary goal of this scholarship is to test whether observed organizational choices can be explained by the key variables thought to lie underneath the

[81] See sources cited supra note 28.

[82] For helpful reviews of empirical work in this area, see Paul L. Joskow, Asset Specificity and the Structure of Vertical Relationships, 4 J.L. Econ. & Org. 95 (1988); Peter G. Klein, The Make-or-Buy Decision: Lessons from Empirical Studies, *in* Handbook of New Institutional Economics 435–64 (Claude Ménard & Mary Shirley eds., 2005); Howard A. Shelanski & Peter G. Klein, Empirical Research in Transaction Cost Economics: A Review and Assessment, 11 J.L. Econ. & Org. 335, 341–46 (1995); Jeffery T. Macher & Barak D. Richman, Transaction Cost Economics: An Assessment of Empirical Research in the Social Sciences, 10 Bus. & Pol., art. 1, at 31–38 (Apr. 2008) (expanding the review to include work in the social sciences beyond the fields of economics and management).

tradeoffs inherent in economic organization.[83] Thus, a transaction that seems especially likely to present hold-up problems—perhaps because it involves intense combinations of relation-specific assets, or high degrees of uncertainty and complexity—is expected to be "made" within a firm.[84] Conversely, economists would predict that a transaction lacking most of these elements will be "bought" outside of the firm.[85] In other words, scholars consider organizational form as the dependent variable, while treating critical transactional properties—such as asset specificity, uncertainty, complexity, and interaction frequency—as the independent variables.[86] Hundreds of these empirical studies have been conducted, ranging from rigorous econometric exercises to anecdotal case interviews.[87] And while the work is open to different interpretations, the evidence does seem to suggest that, as predicted, key theoretical variables play a significant factor in the selection of transactional form.[88]

Most of these empirical studies adopt a simple binary variable ("make" or "buy") in their analysis.[89] Yet it should not be too hard to imagine how scholars might extend this methodology to study

[83] See Shelanski & Klein, supra note 82, at 336–37.

[84] See, e.g., Macher & Richman, supra note 82, at 5.

[85] See id.

[86] Shelanski & Klein, supra note 82, at 338. In addition, empirical researchers will typically include variables in their models to control for effects related to industry, firm size, and other descriptive features.

[87] See Macher & Richman, supra note 82, at 1–2 (cataloging approximately 900 articles on transaction cost economics across a variety of disciplines); Shelanski & Klein, supra note 82, at 338–39 (classifying research methodologies into qualitative case studies, quantitative case studies, and cross-sectional econometric analyses).

[88] See, e.g., Shelanski & Klein, supra note 82, at 336 (reviewing the research and concluding that "a remarkable amount of the empirical work . . . is consistent with TCE predictions—much more so, perhaps, than is the case with most of industrial organization"); Oliver E. Williamson, The New Institutional Economics: Taking Stock, Looking Ahead, 38 J. Econ. Literature 595, 607 (2000) ("Those who have done this modest, slow, molecular, definitive work deserve enormous credit.").

[89] Shelanski & Klein, supra note 82, at 338. The typical approach is to acknowledge the possibility of intermediate hybrid structures (or multi-sourcing strategies where a firm both makes and buys a given input)—but then simplify the analysis into a dichotomous choice between firm and market production. See, e.g., Anne Parmigiani, Why Do Firms Both Make and Buy? An Investigation of Concurrent Sourcing, 28 Strategic Mgmt. J. 285, 287 (2007). For example, in a classic empirical study, Monteverde and Teece define "make" as when a firm performs eighty percent or more of an activity and "buy" as when the firm performs less than this amount. Kirk Monteverde & David J. Teece, Supplier Switching Costs and Vertical Integration in the Automobile Industry, 13 Bell J. Econ. 206, 207 (1982).

hybrid entities. Intermediate transactional forms could be divided, for instance, into different classes of relationships—ranging from closely integrated joint ventures to looser, long-term contracts or informal alliances. Empiricists can then examine, as before, the key variables underlying these transactions to test whether hybrid form follows function.

Consider, for example, a 1997 study by Joanne Oxley examining technology transfer partnerships.[90] After compiling a database of roughly 9000 transactions, Oxley clustered the hybrid relationships into three broad categories: "unilateral" contracts such as licensing agreements or R&D services; "bilateral" contracts[91] such as cross-licensing agreements or joint research efforts; and "equity-based" alliances such as independent joint ventures.[92] The first class of hybrid transactions was said to lie closer to the extreme of spot market exchange, while the latter class approached an intra-firm hierarchical arrangement. Oxley then proposed a series of hypotheses linking observable characteristics to organizational form—for example, an equity-based relationship might be more likely to occur with deals involving product design[93]—and ran statistical analyses to test her predictions.[94] Ultimately, she found that the form of alliance did seem to depend on transactional attributes—and not on other characteristics of the partner firms.[95] Other empirical projects on hybrid organization follow in this same tradition.[96]

[90] Joanne E. Oxley, Appropriability Hazards and Governance in Strategic Alliances: A Transaction Cost Approach, 13 J.L. Econ. & Org. 387, 388 (1997).

[91] The use of the terms "unilateral" and "bilateral" apparently relates to the identity of the parties supplying the technology—and not to the terms' more specialized meanings in contract law. Id. at 389.

[92] Id. at 391–92.

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

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

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

[96] See, e.g., P. Lorange & J. Roos, Strategic Alliances: Formation, Implementation and Evolution (1992); Ranjay Gulati, Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choice in Alliances, 38 Acad. Mgmt. J. 85 (1995);

Unfortunately, however, this empirical work suffers from two thorny problems—the first common to all empirical research in this area, and the second unique to the hybrid context. The first concern: it is exceptionally difficult to measure the independent variables. How, for example, can researchers possibly determine whether one transaction involves especially high levels of relationship specificity? Similarly, it is hard to assess economic complexity or uncertainty in any standardized or systematic manner. These concerns have not deterred economists, of course, and a wide range of survey techniques[97] or creative proxy variables[98] are used to finesse this problem. Ultimately, however, it is fair to question whether researchers are really measuring variables that can be linked back to the key considerations underlying the theory of the firm.

Gary P. Pisano, The R&D Boundaries of the Firm: An Empirical Analysis, 35 Admin. Sci. Q. 153, 154 (1990).

[97] One common approach is to survey the managers involved in a database of transactions, asking them to rate various deals (usually on Likert-type scales) in terms that can be translated into asset specificity. For example, "to what degree does this investment have uses outside the specific transaction. Please answer from 1 (no outside uses) to 7 (completely fungible)." See Macher & Richman, supra note 82, at 6–7. Of course, the subjective nature of these surveys makes it futile to compare the studies across industries. And the self-reported nature of this data introduces the usual risks of bias.

[98] The Oxley study, for instance, hypothesizes that technology design partnerships are more likely to involve relation-specific assets than production or marketing deals. See supra note 93, at 394–95. Other studies select proxy variables that may be directly related to elements of asset specificity. See, e.g., Jeffrey H. Dyer, Does Governance Matter? *Keiretsu* Alliances and Asset Specificity as Sources of Japanese Competitive Advantage, 7 Org. Sci. 649, 650 (1996) (using "interfirm specialization" as a proxy variable); Paul L. Joskow, Contract Duration and Relationship-Specific Investments: Empirical Evidence from Coal Markets, 77 Am. Econ. Rev. 168, 168–74 (1987) (using physical proximity, or site specificity, as a proxy for relationship-specific investment); Paul L. Joskow, Vertical Integration and Long-Term Contracts: The Case of Coal-Burning Electric Power Plants, 1 J.L. Econ. & Org. 33, 34–35 (1985) (same); Scott E. Masten et al., The Costs of Organization, 7 J.L. Econ. & Org. 1 (1991) (using spatial or temporal proximity as a proxy variable); Scott E. Masten, The Organization of Production: Evidence from the Aerospace Industry, 27 J.L. & Econ. 403, 404–06 (1984) (using product complexity as a proxy variable); Thomas M. Palay, Comparative Institutional Economics: The Governance of Rail Freight Contracting, 13 J. Legal Stud. 265, 266 (1984) (using idiosyncratic investments as a proxy variable). There are conceptual concerns, however, with some of these proxy variables, and the extent to which researchers are measuring hold-up risk is ultimately debatable. See, e.g., Shelanski & Klein, supra note 82, at 339–41; Klein, supra note 82, at 451–53.

The second problem, unique to research on hybrid organizations, relates to the granularity of the dependent variable, or, said differently, the number and type of transaction classes. Should researchers divide hybrid organizational structures into three broad classes or ten? And how should they determine the salient characteristics that distinguish one class of entity from another?[99] The typical response is to group a complete spectrum of hybrid transactions into a few broad flavors. But these relationships are complicated, and this approach may miss some important nuances. In short, it can be exceptionally difficult to draw grand conclusions from a high-level examination of this varied terrain—and I am skeptical that a three or four-part division of hybrid organizations provides sufficient granularity to meaningfully assess the diversity of contracting arrangements.

For these reasons, I would contend that it is important to focus more closely on specific types of hybrid relationships.[100] Such efforts may make it easier for scholars to articulate the exact theoretical benefits of intermediate economic arrangements—as well as to conduct the empirical analysis needed to test finer grained distinctions.[101] The balance of this paper, then, takes up this strategy by conducting a more detailed examination of one hybrid relationship that has started to attract enormous attention—whether it is

[99] Oxley puts the problem this way:

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

Oxley, supra note 90, at 391.

[100] For some examples of articles taking this approach, see Jan B. Heide & George John, Alliances in Industrial Purchasing: The Determinants of Joint Action in Buyer-Supplier Relationships, 27 J. Marketing Res. 24, 24–27 (1990) (focusing on informal marketing alliances); Saul Klein et al., A Transaction Cost Analysis Model of Channel Integration in International Markets, 27 J. Marketing Res. 196, 197 (1990) (focusing on the use of joint ventures—where an independent firm is established by two or more principals to conduct an economic activity); Palay, supra note 98, at 266 (focusing on relational contracting).

[101] I will return to the empirical project in Part IV.

discussed in the corporate boardroom or in the private living room. I am talking, of course, about business outsourcing.

II. THE OUTSOURCING REVOLUTION

Over the past decade, we have seen an unprecedented rise in offshore transactions.[102] The conventional explanation for this trend is simply that firms are seeking to arbitrage labor costs. Yet this phenomenon is about more than basic cost savings, and managers are finding it worthwhile to source production in new corners of the globe for other reasons. For example, some companies wish to tap into regional areas of expertise, such as those offered by Indian pharmaceutical scientists or Chinese embedded software programmers.[103] Other businesses are moving overseas to establish a marketing beachhead in the pursuit of new customers.[104] They are finding it easier to build brand recognition, market knowledge, and customer loyalty with a local production presence. In still other cases, legal, political, or regulatory differences around the world may be driving the offshoring decision.[105]

When analyzing any relocation decision, it is important to start with a careful organizational taxonomy. For firms looking overseas have a choice—as they do with any other economic endeavor—whether to perform this activity internally, by setting up a captive offshore center, or whether to move it outside the corporate fold through arms-length transactions. In order to understand the entire gameboard, then, we must distinguish the offshoring and outsourcing decisions.

[102] See supra notes 2–7 and accompanying text.

[103] See sources cited supra note 5.

[104] The McKinsey Global Institute, for example, describes how the attractiveness of local markets plays a part in the selection of a location for offshore work. See, e.g., Diana Farrell, Smarter Offshoring, Harv. Bus. Rev., Jun. 2006 at 85, 86.

[105] The income tax advantages available through China's special economic zones are one example of this. See Vietor & Veytsman, supra note 2, at 7–8. Similarly, Ireland has attracted a significant amount of economic activity, especially in the high technology sector, by offering tax benefits to firms conducting European sales through an Irish subsidiary. See, e.g., Glenn R. Simpson, Wearing of the Green: Irish Subsidiary Lets Microsoft Slash Taxes in U.S. and Europe, Wall St. J., Nov. 7, 2005, at A1.

A. Distinguishing the Offshoring and Outsourcing Decisions

A determination to relocate economic production immediately raises two follow-on questions. First, should the firm continue to perform the activity onshore—that is, in the country where the product will be sold—or should it move the activity to an offshore location? Second, should the firm retain legal control of the business activity, or should it outsource the job to another corporation? Putting these two dimensions together leaves a firm with the four dichotomous choices portrayed in Figure 1.

To briefly illustrate the differences, a firm may engage in shared services by centralizing some activity, say human resources, into a nearby corporate headquarters. Instead of having one or two HR managers at every branch, it simply gathers a dozen employees at corporate. Alternatively, the firm could employ the same managers

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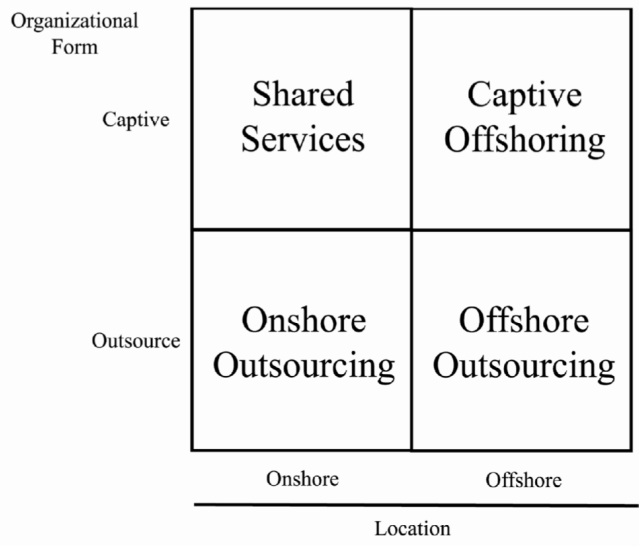
Figure 1. Options for Restructuring a Remote Activity



at a division of the firm in Manila (captive offshoring). Third, it could divest all of this HR work to a different company, located across town (onshore outsourcing). And finally, it could contract

with a firm in India to take on these responsibilities (offshore outsourcing). Each of these options presents a viable strategy, but my primary focus is on the left vertical axis. Of course, this is just a rephrasing of the central question underlying the theory of the firm: what activity belongs within the corporate fold?

In the real world, however, the division is rarely so sharp as that suggested by Figure 1. Some offshoring will indeed remain safely within the legal boundaries of a firm via captive expansion. Other transactions may completely jettison the features that we typically think of as defining corporate ownership: control, residual equity rights, risk, and so forth. Yet many offshoring relationships straddle this line—with mixed elements of ownership and control that are analogous to joint ventures or business alliances. The Wachovia and Genpact outsourcing deal described earlier is one example of this.[106] Let me briefly offer another.

In 1995, a California firm named HireRight brought a novel business model to market: it would assist companies in their recruiting efforts by providing background checks, drug screening, and other services related to the hiring of prospective employees. HireRight grew rapidly, largely through the development of proprietary technology that automated its services and linked the results directly into a client's HR database. By 2007, HireRight served approximately ten percent of companies in the Fortune 500 and had floated an initial public offering on the NASDAQ.[107]

Two years earlier, HireRight had decided to outsource some of its back-office operations. It partnered with a vendor in Mumbai named TransWorks Information Services ("TransWorks").[108] TransWorks would assist HireRight with many different tasks, including making telephone calls to verify employee data, researching employee information online, and performing data entry. The quantity of work would be variable: HireRight would provide

[106] See supra notes 12–22 and accompanying text.

[107] See HireRight Investor FAQ, available at http://ir.hireright.com/phoenix.zhtml?c=209077&p=irol-faq (last visited Jan. 29, 2009).

[108] See Outsourcing Services Agreement, available at http://contracts.onecle.com/hireright/transworks-services-2005-02-03.shtml (last visited Jan. 29, 2009). TransWorks was a subsidiary of the Aditya Birla Group, a leading Indian business conglomerate.

TransWorks with rolling volume projections, and the Indian company would allocate staff to the job as necessary.[109]

Like many outsourcing clients, HireRight insisted on detailed service level requirements related to the volume and quality of work performed by TransWork's employees. It also required TransWorks to submit daily or weekly reports related to its performance—including information on employee tardiness, absenteeism, and productivity. Interestingly, third party monitors and standards were also used to verify operational quality: TransWorks represented that it followed several international data norms,[110] and it agreed to charter semi-annual audits by Ernst & Young (or comparable auditors) to verify ongoing compliance with these standards.[111]

Beyond these detailed requirements, however, HireRight also obtained broader control rights related to the manner in which TransWorks would carry out this activity. For example, the California client could approve the appointment of the overall program manager who would run the project in Mumbai. Similarly, the parties established a pool of "dedicated personnel." Every employee meeting this classification was assigned, on a full-time basis, to the HireRight account. Further, the client approved the appointment of each dedicated employee and enjoyed the discretion to terminate each employee's affiliation with the project (for reasonable cause). With respect to the procedures used to perform the work, HireRight installed specific "change control procedures" forbidding modification of assignments without explicit approval.[112]

Any nuanced relationship of this sort establishes an economic partnership that is arguably more than a market transaction, yet still something less than a fully owned subsidiary. To be sure, anything short of captive custody might technically be considered a contractual exchange (and thus a form of arm's length transacting). Yet there are many variants along this spectrum, and it is worth exploring how and why firms divide organizational governance through hybrid outsourcing deals. The answer, as it turns out, is that these arrangements can offer a compromise among the ten-

[109] Id. at Schedule B.
[110] These included ISO 17799, US-GLBA, and the UK-DPA. Id. at art. 21.02(l).
[111] Id.
[112] Id. at art. 11.01.

sions outlined in Part I of this Article. But before describing the essential features of this governance compromise, let me quickly review the legal structure of outsourcing transactions.

B. The Legal Structure of Outsourcing

Business outsourcing has evolved over time, but the basic contractual framework often remains the same.[113] The partners will typically negotiate four distinct documents.[114] First, they will often sign a confidentiality agreement before pursuing more substantive negotiations. This is especially important when an outsourcing client bargains simultaneously with several potential vendors to take over a sensitive part of the business.

Second, the firms will normally draft a "master agreement" establishing the broad contours of their relationship.[115] This lengthy contract defines the general category of activities to be outsourced and provides an anticipated timeline for moving forward with the relationship. Importantly, the master agreement is rarely used to delineate the specific activities to be outsourced—that will come later. But it does set an overall governance structure for the project, usually by establishing high level review boards, dispute resolution mechanisms, fee arrangements, and bilateral termination rights.

The third type of document used to govern the outsourcing relationship is the work statement. This is where the rubber hits the road, and parties to complicated outsourcing projects will often negotiate (and revise) many different work statements to define or alter the scope of a relationship. These contracts are short, modular agreements that are typically developed by midlevel managers to set the precise duties, and hand-off points, between client and

[113] I describe and illustrate this contractual framework more fully in George S. Geis, Business Outsourcing and the Agency Cost Problem, 82 *Notre Dame L. Rev.* 955, 984–89 (2007).

[114] Of course, in practice there may be more or fewer than four different contracts because the parties will sometimes combine one or more of these agreements into a single document (typically via postscript attachments) or split them into many separate ones.

[115] See, e.g., Amended and Restated Global Master Services Agreement Between Coors Brewing Company and EDS Information Services, L.L.C. (Jan. 1, 2004), http://contracts.onecle.com/coors/eds.svc.2004.01.01.shtml.

vendor. They are also likely to change over time, as a partnership grows or shrinks.

Finally, the parties will draft a service level agreement ("SLA") to govern the quality of work. If the work statements define what will be done, then the SLA defines how well it will be performed. In other words, the SLA provides benchmarks for acceptable outcomes, along with reporting metrics and requirements, penalty clauses, and (perhaps) dispute resolution procedures.[116] Obviously, an SLA will evolve as work statements change.

It is worth noting that the overall structure of this relationship can play a meaningful role in protecting both parties from opportunism. I have argued elsewhere, for example, that the ability to expand or retract the scope of a project (through additions or amendments to the statements of work) acts as a form of staged commitment.[117] In other words, the parties may have room to adjust the depth of their relationship as additional information sheds light on the quality of each counterparty.

Of course, the specific terms in these contracts will play the greatest role in allocating control and ownership between the parties.[118] For example, firms may draft contractual provisions ceding control rights to a client—either by mandating exact requirements for ongoing performance, or by replacing detailed contracts with procedural carve-outs that convey explicit authority over vendor decisions related to the work. Third-party auditors or international standards may also be used to verify (or establish) performance benchmarks.[119]

Alternatively, the parties may structure their affairs to grant a vendor partial "ownership" over the results of its decisions through incentive compatible compensation. Just as a corporation issues options to top managers to focus their efforts on boosting stock prices,[120] an outsourcing client might seek to share economic im-

[116] These terms are sometimes set out instead in the master agreement.

[117] See Geis, supra note 113, at 984–89.

[118] As mentioned earlier, a detailed empirical examination of outsourcing contracts exceeds the scope of this Article.

[119] See Margaret M. Blair et al., The New Role for Assurance Services in Global Commerce, 33 J. Corp. L. 325, 329 (2008).

[120] See Michael C. Jensen & Kevin J. Murphy, Performance Pay and Top-Management Incentives, 98 J. Pol. Econ. 225, 261 (1990); Jensen & Meckling, supra note 38.

provements with a vendor or award an "earn-out" bonus for especially skillful work. These strategies will never work perfectly,[121] but they may help to focus the attention of both parties on similar goals.

Beyond these precise contractual details, however, looms a much larger question: why are these deals even taking place? In other words, are outsourcing projects just a cost arbitrage game? Or might they also serve a more meaningful governance function that links into legal and economic theories of the firm?

C. Outsourcing as a Governance Compromise

In this Section, I argue that business outsourcing (or, for that matter, other hybrid organizational structures) can add value—under the right circumstances—by allowing firms to fashion an efficient governance compromise between markets and hierarchies. This can be true for four reasons. First, business outsourcing helps firms reintroduce some market discipline into production decisions. Second, it can reduce the hold-up problem that arises with market transactions. Third, it can mitigate the corporate agency cost problem. And fourth, it can allow firms to better attune their capital structures to underlying asset characteristics. The decision to pursue a hybrid outsourcing transaction can therefore be seen as an attempt to compromise among each (or all) of these four dimensions.

As is so often the case, however, compromise is unlikely to offer the best solution along any single dimension. It will almost never lead to the cheapest possible input prices, the ideal capital structure, or a foolproof shield against opportunistic renegotiation. But, taking all of the relevant variables into account, an intermediate approach will sometimes be better than pursuing more extreme strategies of firm ownership or simple contracting. These conditions are not universally present, of course, and I will also discuss situations where the variables might caution against compromise.

[121] Anything short of transferring a complete ownership interest to the agent-vendor will leave some room for mischief. See, e.g., Robert H. Sitkoff, An Agency Costs Theory of Trust Law, 89 Cornell L. Rev. 621, 636–37 (2005) (illustrating numerically why this is true).

But first, let me analyze each of these theoretical considerations in more detail.

1. Seeking Market Discipline for Input Prices

The first advantage of business outsourcing comes from an ability to reintroduce some market discipline into production decisions and input prices. This follows directly from Coasean notions of the firm: the outsourced activity no longer enjoys a guaranteed internal "sale," and economic actors will therefore have new incentives to avoid the inefficiencies that can fester with complacency.[122] This is not to say, however, that outsourcing offers as much pricing discipline as frequent spot market exchange. As described above, an outsourcing deal is often contemplated as a longer-term affair, which may provide vendors with at least partial shelter from market forces. It is certainly harder to abandon these ventures than to, say, start buying gasoline from a different filling station.

Nevertheless, there are still practical reasons to believe that business outsourcing can act as a crucible for the fires of market pressure in a way that internal ownership cannot. These relationships are subject to careful upfront negotiation and back-end renewal decisions. They often face frequent and explicit performance evaluation—through detailed service level agreements[123]—in a way that is much less common with internal firm activity. Moreover, firms will sometimes use explicit strategies to reintroduce market pressure, such as securing exit options[124] or hiring multiple outsourcing vendors to perform the same (or very similar) tasks.[125] The net effect, then, is an organizational structure that arguably provides less market pressure than spot contracting but more pressure than captive retention of a given business activity.

2. Mitigating the Hold-Up Problem from Specialized Investment

The second theoretical benefit of hybrid outsourcing involves partial mitigation of the hold-up problem. Recall that one primary justification for intra-firm production is that ownership nullifies a

[122] See Coase, supra note 25, at 391.
[123] See supra Section II.C.
[124] See Geis, supra note 113, at 994–97.
[125] Id. at 989–91.

risk of counterparty renegotiation to expropriate gains from specialized asset combinations.[126] In other words, firms might logically choose to incur slightly higher production costs via internal ownership in order to comfortably make relation-specific investments that will maximize the value of uniquely complimentary assets.

In this context, business outsourcing can again play a compromise role by offering a firm partial protection against the hold-up problem. This is true because an outsourcing partnership, unlike a simple supply contract, allows the partners to carve out enumerated spheres of control, into which they can more safely place relationship-specific investments. This will usually afford less protection than integrating the assets into one legal organization—an outsourcing arrangement is not a complete shield against the hold-up problem—but the ability to limit a firm's exposure to some categories of opportunism can still generate relief.

Recall, for example, the outsourcing partnership between Wachovia Bank and Genpact, under which the Indian firm would redesign and manage much of Wachovia's back-office operations.[127] The relationship was replete with hold-up risk: the parties were not able to completely spell out the scope of their relationship, and Genpact might easily have sought to extract future profits from a specialized investment that would interact uniquely with the back-office systems. From Wachovia's point of view, the safest solution would be to retain ownership of this business activity to protect against an extortion risk. Yet the bank had other good reasons to move these services outside the firm, even if doing so would necessarily expose it to potential hold-up liability.

Wachovia finally settled on a strategy where the business would be moved to Genpact, but the bank would retain control over certain governance features—such as the way that key activities were conducted and the selection of top managers. It also signed a seven-year contract.[128] The net result, then, was an arrangement where Wachovia continued to face hold-up risk for activity outside these spheres of control. But it enjoyed at least partial protection

[126] See supra Section I.A.
[127] See supra notes 12–22 and accompanying text.
[128] See supra note 22.

against opportunism for actions relating directly to these reserved niches of discretion.

3. Narrowing the Scope of Agency Distortions

The third way that outsourcing can compromise between markets and hierarchies relates back to the agency cost problem and the possibility that controlling managers will take selfish action at the expense of firm owners. The intuition here should be quite straightforward: pulling a given activity away from managerial discretion curtails the agent's flexibility to pursue bad decisions. In other words, this supervisory freedom (and the resulting likelihood of information asymmetry) is pruned back and replaced with narrowly tailored contracts to govern the elements of production.[129]

It is important to recognize, however, that moving an activity out of the corporate fold via outsourcing might simply substitute one strain of the agency cost problem with another. Within the firm, managerial abuse of the activity may be narrowed. But a new problem might arise, like a phoenix from the ashes, under the guise of the promisor-promisee relationship. For long-term promisors, just like firm managers, can also be seen as agents—with incentives to shirk or cut corners when they control business activity that will affect the fortunes of a promisee (in this case, the outsourcing client).[130] This means that an outsourcing vendor may make poor choices ex ante (from the client's point of view) and then use information asymmetries to blame bad ex post outcomes on external factors.

Accordingly, for business outsourcing to provide much relief from the agency cost problem, additional structural or contractual mechanisms must be put in place to provide boundaries on vendor discretion. And here, there is ample evidence that parties do plan their relationships quite carefully in an effort to mitigate the agency cost problem.[131] For this reason, complex—and carefully

[129] This argument is thus analogous to a belief that contractual debt is subject to lower agency risk than broadband equity. See supra notes 51–53 and accompanying text.

[130] See Jensen & Meckling, supra note 38.

[131] I have discussed five different strategies for mitigating the agency cost problem in an earlier article. See Geis, supra note 113, at 982–97. Of course, it is theoretically possible that similar mechanisms could be used to bind the discretion of intra-firm

negotiated—partnership structures (like outsourcing) may often pay more attention to agency mitigation strategies than the open-ended charters granted to internal firm managers.[132]

4. Fine Tuning Capital Structure to Asset Clusters

Fourth, there is reason to believe that outsourcing and other intermediate organizational structures can help firms finesse the potential mismatch between asset characteristics and efficient capital structures. Recall that this problem arises because firms are generally required under law to make capital structure decisions (related to both debt and equity) that affect *all* internally owned assets. Yet, as Iacobucci and Triantis have argued, this will result in inefficiencies through "blended capital structures" if heterogeneous asset characteristics call for different financing features.[133] Splitting diverse assets among several smaller firms (or subsidiaries) should allow for better pairings, but this then introduces the above-mentioned transaction cost and hold-up concerns.

Might the use of outsourcing (or other intermediate structures) offer a way to partially diversify on capital structure without giving up all the benefits of economic integration? The possibility of efficient compromise arises because the legal separateness of an outsourcing vendor allows for a tailored capital structure, while the contractual control rights retained by the client provide partial defense against the hold-up problem. Thus, an IT outsourcing vendor may be able to assume conservative leverage ratios (perhaps be-

managers through employment contracts or reporting obligations. The relevant question, then, is whether it is easier (or more effective) for firms to limit the agency problem via external contract. The answer to this question may be yes, given the general governance mechanism of a corporation—which typically conveys broad discretion, by default, to the officers and managers of a firm.

[132] Again, it might be helpful to compare the open-ended relationship of a firm and its equity investors with the more narrowly bounded relationship between a firm and its creditors. Equity investors do not typically delineate the bounds of managerial discretion, beyond reserving control over a few fundamental decisions (like merger transactions). Conversely, debt investors must resort to contractual bargaining and carefully wrought covenants to establish the contours of their governance rights. See Baird & Rasmussen, supra note 46 at 1215–17. Turning from the financing context to the operational context, a firm's relationship with internal managers may be more open ended (like equity arrangements), while its external outsourcing relationship may be more carefully bounded through contract (like debt).

[133] See supra Subsection I.C.2.

cause the volatility of its rapidly changing technology assets calls for such an approach), freeing up an industrial client to take on more debt to finance its stable assets (or to use tailored debt covenants more efficiently). The transaction costs to implement this arrangement may be higher than complete integration, but it may still economize over a contract that delegates absolute control to a counterparty.

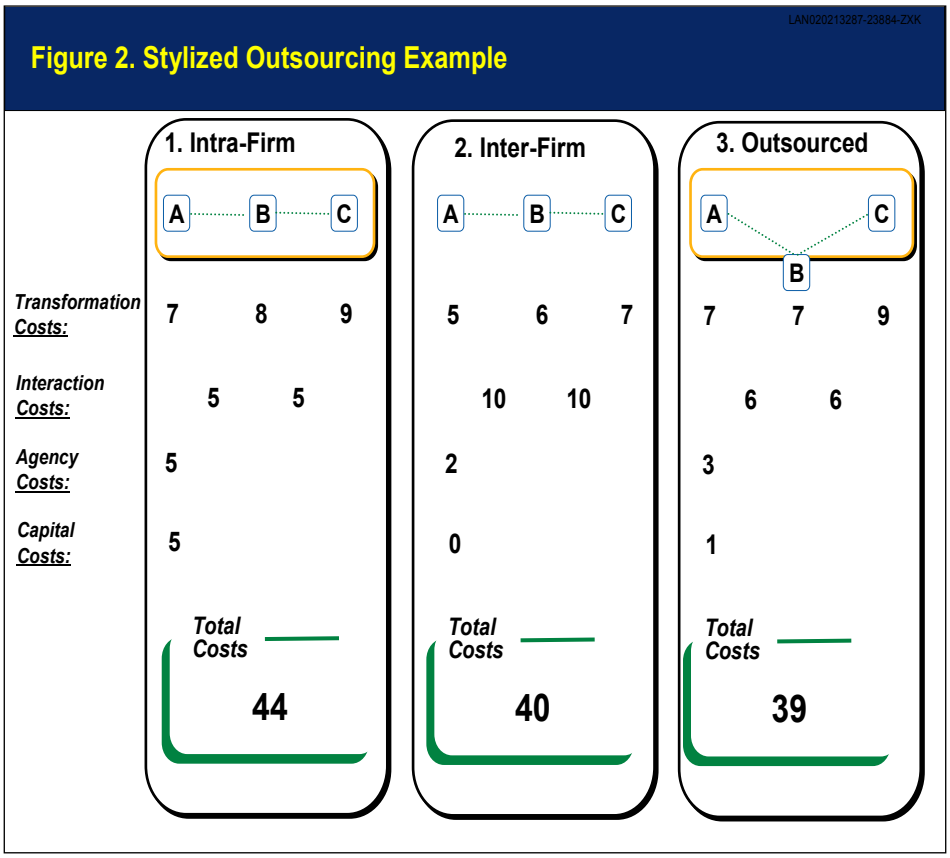
Iacobucci and Triantis do not explore this option comprehensively, but they briefly raise it as a possibility: "Intermediate structures where control boundaries span multiple legal entities may not realize the full benefits of either integration or tailoring, but they may be optimal compromises."[134] Outsourcing might be seen, then, as a middle ground approach to this problem. The pairing of capital structure to underlying asset characteristics, and the advantages of economic integration, will still not be perfect. But outsourcing might be better (under limited conditions) than either stark alternative of intra-firm asset integration or arm's length separation.

5. A Summary Example

A final, stylized example may help to summarize all four of these theoretical considerations. Take a simple value chain, like the one portrayed in Figure 2, requiring only three steps (A, B, and C) to transform raw inputs into finished products. Now, imagine three different ways to organize this economic activity. Option one is to bundle all three steps into a single firm. Option two is to conduct each step with a different firm. And option three is to outsource step B but retain steps A and C within one firm. As Figure 2 shows, there are likely to be different relative costs associated with each of these modes of production.[135]

[134] Iacobucci & Triantis, supra note 9, at 564. The authors seem to refer primarily to the use of, and relationship between, parent and subsidiary firms. Yet, the logic should generalize to business outsourcing transactions and other joint ventures where control and production is shared among multiple legal entities.

[135] Obviously, the numbers here are merely illustrative of the likely relative cost differences between these three organizational options.



Complete integration (option one) should result in higher prices for each of the three transformation stages. As described earlier, the activity is shielded from market pressures in a way that does not occur with option two. Option three retains the lofty internal production costs for steps A and C, but enjoys slightly lower costs for the outsourced step B.[136]

The second expense category involves the interaction costs required to hand off production from one stage of transformation to the next. These should be understood broadly to include both ne-

[136] The cost of step B in this example is portrayed as slightly higher than in option two because the outsourcing transaction is assumed to encompass a longer term relationship, thereby only reintroducing some of the pressures of open-market competition.

gotiation and coordination costs, as well as any hold-up risk that may lead to investments in suboptimal, nonspecific assets. Option one is likely to enjoy the lowest interaction costs (for both hand-offs), option two will suffer the highest costs, and option three will lie somewhere in the middle.

The third and fourth expense categories relate to agency and capital structure costs. These numbers might be understood as representing the net harm from inefficient decisions or expensive monitoring (with respect to agency) and the incremental cost of capital (broadly defined) that must be incurred when financing cannot be paired optimally with assets. Every production strategy will face some agency risk, but it will likely hit harder with option one and lighter with option two (for the reasons described above). Option three will again lie somewhere in the middle. Similarly, capital structure costs will theoretically be highest with complete integration (where blended structures must be maintained) and more moderate with outsourcing. No capital structure penalty is assumed under option two, because each of the three firms will presumably optimize for the specific assets needed to conduct their stage of transformation.

Summing the various costs, under the assumptions of Figure 2, suggests that outsourcing is the best way to go to market. It is never the cheapest approach for any single cost component, but the total outlay is minimized when all factors are considered. Of course these numbers are completely fictional, and other assumptions would change the results. My point is simply to illustrate how the relative differences among these key factors might theoretically commend the use of outsourcing as a sensible governance compromise.[137]

[137] Ultimately, of course, these outsourcing transactions must be subjected to detailed empirical analysis to determine whether this governance compromise plays much of a role in the decision to pursue and structure these relationships. In my view, there are two fruitful areas of inquiry. The first (and more modest) project involves conducting a positive assessment of the key features governing outsourcing relationships. In other words, it is necessary to undertake a contractual coding exercise to determine exactly how parties have structured their operational partnerships. A detailed collection and synthesis of these variables, across a diverse range of settings, would be useful in its own right and is a prerequisite for more ambitious work to test theoretical claims. Armed with this positive data, the second empirical task is to assess whether key differences in outsourcing contracts can be explained by the predicted independent variables. In short, does outsourcing really work as a theory of governance com-

Much more generally, the space between markets and hierarchies becomes an attractive location for economic activity when we recognize that it is possible to assert control, or at least limited control, over the work of others. To be sure, complex organizational contracting is not costless. The parties will incur transaction costs to negotiate these deals and agency costs to monitor them. It may be expensive to coordinate ongoing, bifurcated decision-making authority. And other distortions will likely arise through information asymmetries. But these costs must be weighed against the legal and economic benefits of adopting hybrid organizational structures. There are any number of strategies for parceling out the rewards and risks of production, and no one way of conducting business perpetually trumps the alternatives.

All of this contractual flexibility leads into my next set of questions: are we moving toward a world where firms will enjoy a richer menu of organizational strategies for reorienting operational risk? If so, what might this mean for the management and legal apportionment of economic production?

III. DECONSTRUCTING OPERATIONAL ACTIVITY

A critical simplifying assumption provides the starting point for much of the work on the firm: market transactions necessarily relinquish control. Transaction cost scholars justify corporate-owned activity as an antidote to the hold-out problem arising with a loss of control. Similarly, agency cost theorists posit that firms forfeit control when they cede property ownership to others. These extreme views are useful in the same way that most economic theories are useful: they provide a stark background, against which real-world nuances can be brought into effect.

And in the real world, contracts *can* be used to reorient governance and control. A joint venture could agree (perhaps foolishly)

promise? To do this, it is necessary to collect additional information (or proxy variables) on the most important independent terms: the degree of relation-specific assets, intensity of agency risk, asset heterogeneity, and so on. Econometric models can then be run to test whether observed differences in outsourcing contracts are explained by these independent variables. Ultimately, then, this empirical work will yield evidence about the circumstances where hybrid outsourcing does indeed serve as a form of governance compromise. Or it will suggest that these factors may not hold much water in the real word.

that General Motors makes all the manufacturing decisions Monday, Wednesday, and Friday—while Toyota takes charge on Tuesdays and Thursdays. A franchise agreement can mandate that all Big Macs use two hamburger patties and the special sauce. And a business outsourcing deal can carve out certain high-risk areas and award operating control over these decisions to nonowners. Contracts are pliant tools.[138]

Furthermore, the activity within this netherworld between markets and hierarchies seems to have become much more varied and interesting (and complicated) in recent years. Let me start by briefly examining the syndication experiment in corporate finance and then ask whether something comparable may be emerging with operational projects on the left side of the balance sheet.

A. The Syndication Experiment in Finance

These are interesting times in the world of corporate finance. Historically, a firm's choice of fundraising centered primarily around simple debt or equity instruments. To be sure, intermediate vehicles, such as convertible debt or preferred stock, have been around for a while, but these unorthodox hybrids are uncommon beyond a few specialized contexts.[139] More recently, however, financial alchemists in Chicago and resourceful bankers in New York have concocted a stunning array of synthetic products that increasingly allow firms and investors to slice up and repackage fi-

[138] Indeed, some scholars understand entire corporations simply as a "nexus of contracts" among the relevant constituencies. Jensen and Meckling put forth this view in their foundational work on the firm. See Jensen & Meckling, supra note 38, at 310–11. Other work has also adopted a "nexus of contracts" understanding of the corporation. See, e.g., Stephen M. Bainbridge, The Board of Directors as Nexus of Contracts, 88 Iowa L. Rev. 1, 1 (2002); Hansmann & Kraakman, supra note 70, at 391–93. The nexus of contracts framework is not the only way to understand a corporation, of course, and it faces its share of challenges. See Melvin A. Eisenberg, The Conception that the Corporation is a Nexus of Contracts, and the Dual Nature of the Firm, 24 J. Corp. L. 819, 820 (1999) ("[T]he nexus-of-contracts conception is unsatisfactory . . . in part because the corporation has a dual nature [of reciprocal arrangements and bureaucratic hierarchy.]"); Iacobucci & Triantis, supra note 9, at 569 ("[A] corporation is more than a nexus of contracts or group of assets; it has the legal rights and obligations of a person."); Margaret M. Blair & Lynn A. Stout, A Team Production Theory of Corporate Law, 85 Va. L. Rev. 247, 254–55 (1999).

[139] See Triantis & Triantis, supra note 57, at 1231–36.

nancing risk and reward into customized economic positions.[140] In essence, these new instruments allow principals to choose precisely which strings they want attached to their money. For example, an investor can purchase a credit default swap, along with an underlying debt position in a firm, in order to lay off the risk that the company will skirt its repayment obligations.[141] Or, synthetic financial investments might be peeled off from collective pools of assets to mete out nuanced payment waterfalls and risk positions.[142]

How exactly do these newer breeds of financial contract work? The details can grow quite complex, but it is useful to consider a basic example related to bank lending. Historically, a bank willing to loan money to, say, a corner grocery store would fork over the cash and account for this outlay by increasing another asset account (reflecting the fact that the grocery store was eventually obligated to repay the money). The main point, for our purposes, is that the risk of default, and the rewards of repayment, remained with the lending bank.

Recently, however, it is more likely that this same bank would syndicate—or "securitize"—this loan in order to remove it from the bank's balance sheet.[143] There are at least two general strategies for syndication. The first is simply to sell the loan (typically in combination with other loans) as a securitized bond. The second strategy is to "synthetically securitize" the loan through the use of derivatives. For instance, the bank might lay off the default risk (with credit default swaps[144]) and lock in the current interest rate

[140] See, e.g., Aaron Lucchetti & Alistair MacDonald, Trading Up: Inside the Exchanges' Race to Invent New Bets, Wall St. J., July 6, 2007, at A1 (describing the expansion of the number and variety of derivative instruments available on the Chicago Mercantile Exchange and noting that global derivatives trading has grown on average by thirty percent per year since 2001).

[141] A credit default swap is a derivative contract where two parties will trade the credit risk of an independently referenced third party. If the third party fails to repay a loan, for example, the protected party receives a payment from the swap counterparty to compensate them for the event of default. See Partnoy & Skeel, supra note 10, at 1019. Credit default swaps thus allow investors to concentrate on other risks, such as interest rate swings, which they may feel more comfortable bearing.

[142] See, e.g., Carrick Mollenkamp & Serena Ng, Wall Street Wizardry Amplified Credit Crisis, Wall St. J., Dec. 27, 2007, at A1 (explaining multiple rounds of asset pooling and partitioning).

[143] See, e.g., David Roche, The Global Money Machine, Wall St. J., Dec. 14, 2007, at A21 (describing the use of these strategies to increase bank liquidity).

[144] See Partnoy & Skeel, supra note 10, at 1023–28.

(with interest rate swaps[145]). The net effect of either strategy is that the loan is removed from the bank's books, leaving it free to make new investments.[146] Of course, if the bank wants to retain a narrow slice of risk—keeping, for example, loans related to the grocery business in a certain part of town—it is free to order its affairs accordingly.

More generally, finance and legal scholars are starting to question whether this march toward increasingly complete capital markets is leading to a situation where working capital is becoming divorced from risk capital.[147] As financiers engineer new strategies for replacing the broad and untethered risk of equity investments with carefully tailored alternatives, we may need to rethink the implicit assumption that diversified shareholders are necessarily the cheapest bearers of risk.[148] Myron Scholes, the Nobel Prize-winning financial economist, first raised this possibility ten years ago,[149] and Ron Gilson and Charles Whitehead have recently explored it in relation to corporate governance.[150] Douglas Baird and Todd Henderson have also considered similar themes in their work on the

[145] An interest rate swap is another type of financial contract where one category of future interest payments is exchanged for another. It is often used to trade floating interest payments for fixed interest payments.

[146] See Roche, supra note 143, at A21. This assumes, of course, that the structure conforms to accounting standards governing the removal of the assets from a balance sheet.

[147] See Robert C. Merton, Financial Innovation and Economic Performance, 4 J. Applied Corp. Fin. 12 (1992) (discussing the split between working capital, used for financing firm projects, and risk capital, which bears the ultimate results of such efforts); Gilson & Whitehead, supra note 10, at 232–33 (discussing the notion of increasingly complete capital markets as a recent development allowing investors to accept small portions of risk—instead of "broadband" equity risk).

[148] See Gilson & Whitehead, supra note 10, at 231. It is also worth exploring the extent to which these products create additional agency distortions. For instance, syndicated debt originators may lose incentives to negotiate contractual protections against agency abuses if they promptly carve up the debt into new products and offload different tranches of this debt to scattered groups of investors. Recent turmoil in the credit markets suggests that these problems may indeed be significant. See, e.g., Mollenkamp & Ng, supra note 142, at A1.

[149] See Myron S. Scholes, Derivatives in a Dynamic Environment, 88 Amer. Econ. Rev. 350, 366–67 (1998).

[150] Gilson & Whitehead, supra note 10, at 252–53. The authors speculate that stock may ultimately morph into a "management incentive contract" if diversified equity holders no longer represent the cheapest supply of capital (though they ultimately doubt that all financing will take the form of risk-managed variants on debt—as there will likely be situations where diversified equity remains the best source of funds). Id.

appropriate scope of fiduciary duties and investor disclosure obligations.[151]

It is important to note, however, that this financial development has both advantages and disadvantages. As recent market events have demonstrated, innovation along these lines can mutate into new demons.[152] For example, the additional layers of complexity and opacity in these contracts can veil incentives and results—thereby generating new economic distortions.[153] When the rules change, creative parties can often find both good and evil ways to play the new game, and some financial Frankensteins have surely awoken. My point is simply that financing has become much more flexible and complicated in recent years.

In any event, we are only starting to understand these shifting dimensions of risk, control, ownership, and commitment, and my purpose here is not to explore the likely evolutionary path of corporate finance in any level of detail.[154] I only wish to note the trend towards increasingly complete capital markets as a reference point. For my real question is whether something similar may also be occurring with respect to a firm's operational alternatives.

In other words, it is worth considering whether the recent kaleidoscope of financing alternatives may be only half of the story. For just as investment inputs can be tailored through increasingly complex contracts, operational outputs might also be aggregated or apportioned between different legal entities. The rewards of ownership can be shared through incentive compatible compensation clauses that divide the spoils (or pain) of ex-post outcomes. Likewise, risks associated with outcome variability might conceivably

[151] Douglas G. Baird & M. Todd Henderson, Other People's Money, 60 Stan. L. Rev. 1309, 1342–43 (2008) (discussing the appropriate scope of fiduciary obligations and corporate disclosure requirements in light of recent capital market developments).

[152] One example is the incremental agency cost problem arising through loan origination and rapid resale. See, e.g., Henry T.C. Hu & Bernard Black, Debt, Equity, and Hybrid Decoupling: Governance and Systemic Risk Implications, 14 European Fin. Mgmt. 663, 665–66 (2008) (describing this and other unpleasant circumstances surrounding financial disintermediation).

[153] Id. at 665.

[154] Indeed, recent turmoil in the credit markets cautions against bold predictions on the future course of financial investments. We may, in fact, see a return to basic investing tools until the financial markets can work out the supporting mechanisms needed to manage increased contractual complexity.

be run through a contractual meat-grinder to be parsed (or pooled) between multiple parties.[155] Or, said another way, residual owners may not always be the logical parties to exercise ultimate control over certain uses of operational assets.

Indeed, this sort of operational flexibility has been discussed before—by an infamous energy firm in Houston responsible (at least indirectly) for transforming corporate law around the globe. I cannot think of three words more likely to startle corporate law scholars than "Enron was right." Nevertheless, this is exactly the contention I am now about to make.

B. Was Enron Right?

Let me quickly clarify—before you toss the rest of this Article (and I toss my academic reputation) into the wastebasket. I am not referring to the ethical lapses, lies, theft, or criminal fraud perpetrated by Enron and its employees. These were, of course, reprehensible. Nor do I believe that Enron was right with respect to the tactical execution of its business strategy. Others have clearly documented how the firm got in way over its head by making deals it did not understand and by failing to erect firm-wide systems and controls for governing its affairs.[156] My argument is simply that Enron's high-level strategy, its vision of the way that economic production would eventually be organized, may have been quite prescient.

What, then, was Enron's grand theory of economic organization? In a nutshell, the top managers at this troubled energy firm believed that ongoing market pressures, combined with falling interaction costs, were leading to a world where supply chains would be splintered into atomistic subcomponents and parceled out among many different owners. Or, in other words, that we are

[155] The possibilities here have been discussed frequently in relation to financial derivatives and syndicated investment products—but much less so in the operating context.

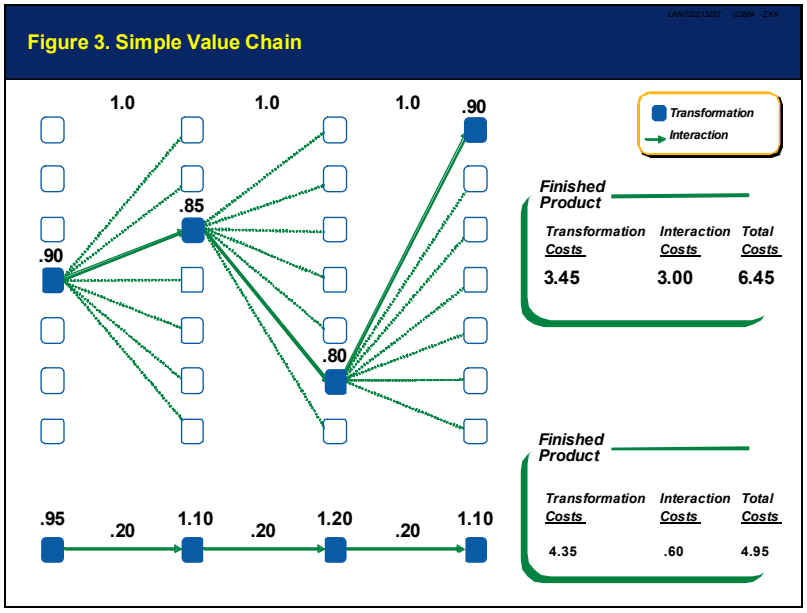
[156] See, e.g., John C. Coffee, Jr., What Caused Enron? A Capsule Social and Economic History of the 1990s, 89 Cornell L. Rev. 269, 271–72 (2004); Jeffrey N. Gordon, What Enron Means for the Management and Control of the Modern Business Corporation: Some Initial Reflections, 69 U. Chi. L. Rev. 1233 (2003). For an entertaining popular press account of Enron's shortcomings, see Kurt Eichenwald, Conspiracy of Fools: A True Story (2005).

moving toward an increasingly complete spectrum of operating structures.

The easiest way to understand this argument is to reconstruct a simple value chain, representing the sequential flow of goods and services from raw states into finished products.[157] As Figure 3 illustrates, two broad categories of costs must then be incurred at each stage: the transformation costs required within each step to boost goods or services closer to their finished state, and the interaction (or transaction) costs[158] required to coordinate and hand off the activity to the next phase of production. For example, in order to make a car, manufacturers must harvest rubber trees into rubber, transform rubber into tires, assemble tires onto axles, and so on. The sum of transformation costs (at each stage in the value chain) and transaction costs (from moving between stages) will represent the total cost of production. And, obviously, the ability to sell the good or service for any amount in excess of this cost total is what generates economic surplus.

[157] The use of value chain analysis dates back to Michael Porter's seminal work on strategy; this framework is commonly employed in management decisions. See Michael E. Porter, Competitive Advantage: Creating and Sustaining Superior Performance 33–61 (1985).

[158] These costs should be viewed broadly, in the manner described above, as representing all barriers to the movement and efficient use of assets. See supra Section I.A.



Historically, interaction costs were thought to be lower when activity moved internally from one step in a value chain to another (portrayed as the bottom chain in Figure 3)—instead of passing via contracts between distinct legal persons (portrayed in the upper part of the figure). The Ford Motor Company famously owned the rubber tree forests used to make the tires on its Model T. Similarly, the retailer 7-Eleven kept cows to produce the milk that it would pasteurize, bottle, and sell in its stores.[159] This vertical integration made perfect Coasean sense in a world where transaction costs were significant across markets, but more modest within internal hierarchies.[160]

Yet, in Enron's view,[161] two fundamental changes were starting to take place as external transaction costs began to drop (relative to the internal costs of navigating hierarchies) in response to technological improvements, faster communication networks, falling

[159] See Mark Gottfredson et al., Strategic Sourcing: From Periphery to the Core, 83 Harv. Bus. Rev. 132, 133–37, (2005) (describing 7-Eleven's historical strategy).

[160] See supra Section I.A.

[161] And, to be sure, Enron was not the only turn-of-the-century prophet proclaiming these emerging seismic fissures. See, e.g., Lowell L. Bryan et al., Race for the World: Strategies to Build a Great Global Firm, at xiii–xviii (1999).

trade barriers, and the like. First, firms would need to rethink the calculus of bundling most value chain activities within their corporate borders. Second, the value chains themselves were likely to shift, as innovators capitalized on new ways to sequence, organize, and own the factors of production.

How, then, should a firm compete in this brave new world? Broadly speaking, there are at least three options. First, managers might continue to maintain legal control over most parts of a value chain. This may make sense in some industries, but it will likely prove much more expensive to go to market this way in others.[162] A second strategy is to focus on only one part of the value chain. Again, this approach has appeal for some firms, but competition may become fierce in increasingly global markets. A firm would have to be among the most competitive vendors in the world to generate substantial profits through that particular slice of activity.

The third strategy—and the one pursued (at least in theory) by Enron—is to focus neither on a fully integrated value chain nor on a vertical slice of that chain, but rather to compete in the intermediate spaces. In other words, a company following this strategy would work to streamline the ability of other firms to take advantage of falling interaction costs by helping them find new ways to slice, dice, and trade operational risk and reward. They may, for example, try to create new markets or new structures for pooling

[162] To illustrate this with the hypothetical numbers of Figure 3, imagine that an industry has four steps in the value chain. A vertically integrated firm can take the product to market by incurring the following transformation costs: step 1 = 0.95; step 2 = 1.1; step 3 = 1.2; and step 4 = 1.1. Imagine further that it has historically cost the firm 0.2 in internal transaction costs to move between each step in the value chain. Thus the fully integrated firm can bring the product to market for a total of 4.95 (4.35 in transformation costs plus 0.6 in transaction costs). This approach may have compared favorably in the past to a nonintegrated strategy, under which each stage of transformation is likely to be cheaper (because of market pricing pressure) but transaction costs are likely to run higher. Continuing the example, suppose that a firm seeking to stitch together an external, market-based value chain would incur transformation costs of 0.9, 0.85, 0.8, and 0.9 (for the four steps) and transaction costs of 1.0 (between each step). The total cost of going to market in this case would run 6.45 (3.45 in transformation costs plus 3.0 in transaction costs) and be far more expensive than internal ownership. If, however, external transaction costs drop to 0.1, then the total cost of production through outside sourcing plunges to 3.75 (3.45 in transformation costs plus 0.3 in transaction costs). Under these illustrative assumptions, firms that continue to compete through internal hierarchy will face a significant cost disadvantage.

and syndicating operational risk. This sort of strategy is analogous, then, to one pursued by large banks looking to aggregate and repackage financial instruments as a way to offer new products, and customized risk profiles, to borrowers and investors.

Enron ultimately failed spectacularly at this endeavor—in part because it was difficult for employees to translate such a lofty vision into pragmatic business plans.[163] But it is intriguing to ask whether Enron's bold view of the future may have nevertheless been quite perceptive. For at the exact same time that the Houston energy firm's stock was plummeting from the pinnacle of Wall Street to the gutters of history, other companies began experimenting with new strategies for disaggregating their value chains via outsourcing.

Suppose that Enron *was* right. What is this likely to mean for the legal ownership of operational risk?

C. Implications of More Complete Operational Structures

If we are indeed entering a world where falling transaction costs are presenting firms with more granular organizational choices (and while there is anecdotal evidence of such change,[164] I will certainly attempt no empirical proof of the matter), then what would be the effect of widened access to this space between markets and hierarchies? Let me briefly hypothesize on three possible paths forward: synthetic risk management, reshuffled value chain ownership, and a backlash toward simplicity.

The first possibility is that organizational divisions will remain much as they are, but firms will use a more complex web of contracts to synthetically manage operational risk. In other words, a firm's assets may largely remain in its existing legal body, even if the economic risk tied to the performance of these assets increas-

[163] For example, one way that Enron sought to implement this strategy was by constructing new markets for trading operational risk—both in its traditional lines of business (long term energy), as well as in less familiar industries such as broadband and weather. Yet problems soon arose when Enron was unable to fully comprehend the risk positions it was taking in these ventures—and the firm soon morphed from a neutral market maker into a highly leveraged principal with major bets on future industry events. Things then got ugly when it lost these bets. See sources cited supra note 156.

[164] See, e.g., Bryan et al., supra note 161, at 22–24.

ingly crosses over to impact different entities. A firm can, for instance, already take contractual positions that hive off and transfer the risks of commodity price swings, inflation, or general economic downturns—thereby concentrating on the specific uncertainties that they feel best suited to manage.[165] It is possible that these synthetic contracts will continue to grow in scope and complexity, offering a more complete basis for managing (or magnifying) operational risk without the need to worry about which legal entity owns which assets.

Suppose, for example, that I own an umbrella manufacturing company. My profits from year to year depend on a host of different factors, including the weather, the overall economy, the price of raw materials, and the cost of labor. Yet in a world with robust operational contracting, I might hedge against most of these effects while retaining the exact same physical assets and operating procedures inside "Umbrellas Inc." I will buy weather derivatives that pay off during long periods of sunshine, a contract tied to the general health of the economy, a position to offset increases in labor costs, and so on. If I can successfully hedge these major risk points, then my results may ultimately reflect only the ability to manage and coordinate the production process—operational risks that I might feel quite comfortable accepting. And, importantly, all of this occurs without significant change to the size or quantity of physical assets within my firm.

A second possible scenario is that falling interaction costs will splinter industry value chains, leading to much more profound organizational change. In other words, the space between markets and hierarchies (or really, the use of this space) may expand as the relative cost advantages of atomistic contracting become more compelling.[166] From a legal point of view, this would mean that the

[165] See Gilson & Whitehead, supra note 10, at 246–47.

[166] Of course, as described earlier, falling interaction costs do not automatically mean that firms are better off moving the activity out of their corporate control: they might still engage in captive offshoring. The real question is whether these changes are creating relative cost advantages in the expenses that must be incurred via contractual transactions and those maintained within the firm. This is ultimately an empirical question, but firms will likely find it difficult to maintain cost advantages in all localities—suggesting that interaction costs may drop more rapidly outside a firm than inside it. For preliminary evidence of this, see Jackie Range, Rethinking the India Back Office, Wall St. J., Feb. 11, 2008, at A6 (describing a report by McKinsey & Co.

control and ownership of assets could effectively become apportioned among diverse legal entities through more nuanced contracts.[167] If so, it may become increasingly difficult to untangle the precise operational risks owned by an economic entity at any given moment in time.

Practically, this would mean that firms facing shifting pressures on their value chains—and on the optimal sequencing of economic activity[168]—might turn to an increased use of outsourcing (or other shared contractual strategies) to support changes in production. Such a strategy could provide firms with additional flexibility or allow them to rapidly alter a faltering business model. Indeed, the focus of outsourcing deals is increasingly turning from "lift and shift" endeavors toward strategic efforts to "transform and shift."[169]

It is worth noting that outsourcing vendors may resist contractual attempts to wrest control of their activity (or, alternatively, they may demand higher prices in exchange for these concessions). It is more difficult to run a complex outsourcing business when your hands are tied by contractual provisions limiting employee mobility, the use of different real estate and technology assets, and cumbersome approval rights. Moreover, these provisions can also have negative implications for employee morale; some managers resent being shackled to one client's project for all of eternity. Any given relationship will likely depend on many factors, and we might expect control to ultimately be sliced, diced, and aggregated in diverse combinations.

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and the India policy consortium NASSCOM finding that captive offshoring centers cost thirty percent more than outsourced offshoring centers for some types of work). Relative cost advantages may also be explaining recent interest in the sale or spin-off of some captive centers.

[167] Such a development would also raise interesting agency law questions akin to those underlying the problem of lender liability. See, e.g., Daniel R. Fischel, The Economics of Lender Liability, 99 Yale L.J. 131, 146–47 (1989). More generally, there is a potential risk that a counterparty assuming significant control over the use of assets may be legally responsible for third party tort claims. I am not aware of any lawsuit along these lines in the offshore outsourcing context, but it would be worth examining the issue in more detail.

[168] As firms are able to access cheaper labor, for example, they may deemphasize the use of capital investments, or reorder activities in a way that allows for more intensive use of existing capital. See Farrell, supra note 104, at 88.

[169] See, e.g., Jessica Twentyman, Transformation is the First Step in Outsourcing, Fin. Times, Oct. 3, 2007, at A6.

Under this view of the world, then, legal ownership of assets could change more dramatically as industries outsource, splinter, resequence, and recombine the puzzle pieces of economic production. It does not necessarily mean that legal entities will become smaller. Indeed, there may be reasons for some large corporations to specialize in narrow areas of production to generate economies of scale that allow them to bear slivers of operational risk more efficiently than anyone else. Other bold aggregators might find it sensible to gather and syndicate operational risk across larger patches of industry. The main point is that asset ownership and economic activity might reside more in a netherworld between markets and hierarchies—such that legal title may not mean as much as it has in the past.

Finally, there is a third possible scenario that is much easier to articulate: a backlash toward simplicity. By this, I mean that innovations in economic organization might lead to new frustrations—and operational perils—such that firms will revert to simpler, vanilla supply contracts. Indeed, there is strong recent evidence that this regression is taking place on the financing side of the balance sheet. Synthetic financing is rapidly losing favor, and firms seeking to raise new capital are returning to the most transparent forms of debt and equity. It is possible that something similar may occur with respect to operational activity, at least for some period of time.

No matter which (if any) of these scenarios emerges, firms will undoubtedly place a greater premium on risk management. It will become increasingly important to develop managerial prowess and technological controls clever enough to plumb the depths of complex operational networks and gather relevant information. Beyond this, however, it is difficult to make meaningful predictions about how shifting value chains will ultimately impact the organization of economic production, and I offer these ideas only as very preliminary thoughts on the matter.

CONCLUSION

For the past several decades, legal scholars have focused much of their attention on two stark alternatives for organizing operational activity. On the one hand, a firm can retain the factors of production within its corporate borders in order to cut transaction

costs and maintain hierarchical control over future uncertainties. On the other hand, it may purchase the necessary inputs through market exchange to garner lower prices or reduce agency cost distortions. In this Article, I have argued that it is worthwhile to move beyond this bifurcated model of production by digging into the more nuanced contractual activity that comprises the space between markets and hierarchies. For, in reality, firms will sometimes seek to organize economic production within hybrid entities in order to compromise on the various factors underlying firm governance.

More specifically, I have examined the recent rise in complex business outsourcing transactions to illustrate how firms might balance four fundamental variables. Outsourcing allows firms to recapture some of the market pressure on input prices. It offers partial protection against the hold-up and agency cost problems. And it can help firms craft more granular capital structures. These benefits will usually come with a price, but compromise can nevertheless offer a theoretically sound equilibrium under the right circumstances.

Finally, I have also pondered a more abstract possibility: that the same forces facilitating global trade are also making it easier for firms to access a complete continuum of organizational forms. If this is indeed true, we might expect to see ongoing innovation in the way that firms shuffle current value chains, combine and syndicate economic production, and customize legal relationships. Just as recent changes in capital markets and corporate finance have roiled the strategies used by firms to raise capital, corporations may increasingly look to new options for parsing and pooling operational risk and reward. Despite the bold predictions of Enron, we are not yet in a frictionless world. But legal scholars should keep a watchful eye on the possibility that atomistic contractual compromise may begin to eclipse both captive corporate ownership and simple market exchange across wider swaths of our economy.