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BEYOND RELATIONAL CONTRACTS:
SOCIAL CAPITAL AND NETWORK GOVERNANCE IN PROCUREMENT CONTRACTS

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ABSTRACT

The master agreements that nominally govern the transactions between mid-western Original Equipment Manufacturers and their suppliers are not, for the most part, designed to create legal obligations. Rather, they create a space in which private order can flourish, much like the role played by firm boundaries in the Coase-Williamson theory of the firm. This Article explores how sophisticated transactors in this market have combined governance techniques associated with arm's-length contracting, intra-firm hierarchy, and trust-based relational contracting to create relationships that are long-term, highly cooperative, and characterized by significant relationship-specific investment. It suggests that these transactors have been able to accomplish these outcomes with only minimal reliance on the legal system, in large part because they operate in a market of highly interconnected firms—a network that itself functions as a contract governance mechanism. It then explores the implications of these contract structures and the availability of network governance for firms' make-or-buy decisions and the likelihood of innovation.

INTRODUCTION

Large mid-western original equipment manufacturers (“OEMs”) have devised contractual structures to govern their relationships with their suppliers that, while nominally contractual in the traditional sense, are better understood as private order institutions. Like diamond merchants,¹ cotton merchants,² and grain merchants,³ who have largely opted out of the public legal system by creating trade-association-run private legal systems to resolve disputes and support trade among their members, these buyers have structured their supplier relationships in ways that make the legal system largely irrelevant to their contracting relationships.⁴ Although the contracts used to consummate these transactions are long and detailed, they are not designed to create incentives for performance and breach primarily through the prospect of court-imposed monetary

¹ Bernstein (1992) (discussing private ordering in New York's 47th Street diamond markets).

² Bernstein (2001) (describing private ordering in the cash cotton markets).

³ Bernstein (1996) (describing private ordering in the grain and feed business).

⁴ Contracts, however, remain important to establishing and protecting intellectual property rights and ownership of physical assets (like tooling).

damages. Rather, they are designed to keep the law—in the sense of legal enforcement of contractual obligations—largely out of their relationship with their suppliers. As one OEM explained, “We have a Master Supply Agreement [with our suppliers, yet it] is not a contract to buy. It is an agreement as to how we are going to do business.”⁵

Conceptually, the Master Supply Agreements (“MSAs”) that formally govern these transactions play a role in supply relationships that is similar to the role that is played by firm boundaries in the Coase-Williamson theory of the firm: they clear a space for other, extralegal modes of contract governance to work.⁶

This Article explores the ways that the sophisticated transactors in these markets have combined the governance techniques associated with arm’s-length contracting, intra-firm hierarchy, and trust-based relational contracting to create relationships that are long-term, highly cooperative, and involve adequate levels of specific investment. It suggests that these transactors have been able to accomplish these outcomes with only minimal reliance on the legal system, in large part because they operate in a market of highly interconnected firms—a network that itself functions as a contract governance mechanism. When network governance is available, it makes other contract administration mechanisms more powerful and broadens the self-enforcing range of contractual obligations. It also expands the types of behavior that can be sanctioned through reputational harm or rewarded through reputational or other nonlegal benefits—extending it to include behavior that could not be sanctioned or rewarded through contract. As a consequence of these and other effects, the availability of network governance enables transactors to credibly commit to obligations that, in the absence of the network, could not be adequately bonded through either legally enforceable arms-length agreements or long-term relational contracts.

More broadly, the Article suggests that a firm’s make-or-buy decisions may be influenced by whether the firm and its putative suppliers are part of a highly interconnected network of firms. When network governance is available and

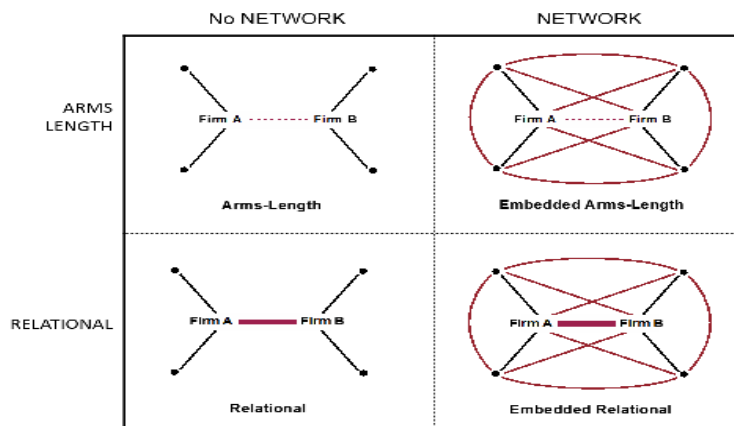
⁵ Unless otherwise explicitly noted, quotes from Mid-Western OEMs and their suppliers were taken from hundreds of pages of interview transcripts conducted by Josh Whitford and his collaborators that are described in Whitford (2006, Appendix A1). Due to restrictions placed on the original study by an institutional review board, identifying details about the interviewees have been replaced by general descriptions of the firm’s type along with the designation “NOE Respondent.”

⁶ A similar argument has been made about the function of the legal doctrines of employment at will, see Epstein (1984), and the business judgment rule. See Rock & Wachter (2001).

transactors are also able to avail themselves of contract administration mechanisms that recreate many of the governance benefits of intra-firm hierarchy, the functional domain of “buy” may be far broader than it is assumed to be in the classic Coase-Williamson theory of the firm. This expanded domain of buy together with the recognition that the local network around a supplier (that is, the firms it buys from and sells to directly) may influence the likelihood that it will be able to innovate on the buyer’s behalf, suggests that OEMs’ make-or-buy decisions may be driven not only by transactions costs as traditionally defined, but also by the network structure of the relevant market, the network position of available suppliers, and the OEM’s need for innovation.

In sum, understanding the ways these agreements are governed suggests that their goal is not merely to secure performance of the promises they contain. Rather, and perhaps more importantly, these agreements are artfully designed to create a framework for growing relational social capital and leveraging network governance—a framework that is likely to succeed in creating the conditions that will better enable transactors to identify and bond value-creating exchanges in the future. Given this, modern commercial lawyers who want to draft contracts that will promote the creation of the greatest value for their clients over time, must take into account the network structure of the market in which their clients operate, as well as buyer and supplier’s past relationship and position in that network, in order to achieve this goal.⁷

⁷ More specifically, lawyers will need to develop different contractual structures for deals where their clients are transacting in the network-free context depicted on the left of the figure below and deals that take place in the type of deeply embedded network context depicted on the right.



Part I of this Article provides an overview of the MSAs used in OEM-supplier relationships. It discusses the contractual and practical limits on the monetary damages they make available and describes the interior remedies created by buyers to increase the likelihood that suppliers will perform as promised. It also explores a variety of ways that these agreements effectively recreate the governance methods commonly associated with intra-firm hierarchy within these contractual relationships.

Part II looks at the contract administration mechanisms that, together with certain terms in the master agreements and attention to network position, create the conditions that enable cooperative contracting relationships for producing goods to a buyer's specifications to arise and endure.

Part III draws on interview evidence from a study of OEM-supplier relationships in the upper mid-west, as well as empirical studies of procurement contracts and strategic alliances, to explore how make-to-spec contracts evolve into highly relational contracts. It suggests that as transactors successfully work through the inevitable bumps in their initial contracts, they begin to exchange information and to develop the type of relationship-specific social capital that gives rise to both interpersonal and inter-organizational trust. Over time, as a consequence of these interactions, transactors become better able to both identify additional value-creating deals and partially bond more complex undertakings (like the co-development of new products) for which it is much harder, if not impossible, to write a contract with objective metrics for determining breach or performance.

Part IV introduces the concept of network governance. It explores the ways that the network position of both the buyer and supplier (sometimes referred to as "structural social capital"⁸) can be understood as a distinct contract govern-

⁸ This Article uses the term "structural social capital" to refer to the advantage that accrues to a firm or person from their position in a network with a particular structure. It uses the term "relational social capital" to refer to the relationship-specific trust and understanding that emerges between two individuals or two firms. In the sociology literature, "structural social capital" is sometimes referred to simply as "social capital," see Burt, Kilduff & Tasselli (2013, 529) ("Network forms associated with advantage constitute social capital"), or as "structural embeddedness." In that literature "relational social capital" is also referred to as "relational embeddedness." See Moran (2005) (describing the genesis and definition of these terms). Other authors refer to social capi-

ance mechanism – one that can substitute for contract provisions or complement and strengthen them – and discusses in more depth the ways that the availability of network governance may affect contractual relationships and the types of credible commitments transactors can make. It discusses the way that some firms have sought not only to leverage the force of network governance, but also to actively create it by encouraging the formation of smaller local networks (such as relational ties among their suppliers) to bond obligations that cannot be adequately bonded through the law, the forces of repeat dealing, or network governance writ large.

Part V is more speculative. Drawing on foundational insights from network analysis, it discusses the ways that a supplier's local network might influence the likelihood that it will be able to innovate in coordination with, or on behalf of, a buyer. It then suggests that the need for quicker and more frequent innovation may be a reason that these OEMs have shifted from vertical integration to outsourcing, despite the costs of governing these highly relational contracts, a cost that markedly increases when supplier-led innovation is expected.

Part VI concludes. It suggests that an appreciation of the ways that contract provisions and other contract governance mechanisms interact with social capital and network position, together with a clearer understanding of the true costs and benefits of relational contracting, will enable firms to make more informed make-or-buy decisions. In addition, it will enable commercial lawyers to construct more effective contract governance mechanisms when firms do decide to outsource production.

I. THE WEAK SHADOW OF THE LAW

Outsourcing relationships between large mid-western OEMs like John Deere and parts suppliers are typically governed by MSAs. These lengthy agreements cover many of the core legal aspects of a supply contract – such as limitations on liability, warranty, confidentiality, modification, ownership of tooling and machines,⁹ insurance, cure, and intellectual property. However, neither the OEMs

tal as having relational, structural, and sometimes cognitive dimensions. See Nahapiet & Ghoshal (1998).

⁹ Many MSAs allocate ownership of specialized machines used in the supplier's plants to the buyer. Buyers are given the right to inspect the machines and suppliers are required to clearly mark the machines as the buyer's property, insure them, and provide buyers with periodic maintenance reports. These agreements are an important feature of these deals; they may miti-

nor their suppliers view these agreements as creating a set of obligations to be enforced in court. Rather, they view them as creating a framework for a contracting relationship. As Harley Davidson’s MSA itself explains, “Th[is] MSA. . . describes in general terms how we work together with our suppliers. . . .[It] is not a long-term commitment; rather it is a commitment about how we will operate in the long-term”¹⁰. And, as one supplier explained, reflecting a similar conception of the role of contract, “the contract is just a formalized handshake that says that your intention is to put business in here.”¹¹

1. MSAs and Traditional Legal Remedies

Many MSAs used in the largest deals are structured as long-term agreements with fixed or variable quantity provisions. In most small or medium sized deals, however, the MSAs omit a quantity provision.¹² They are therefore legally unenforceable until a purchase order specifying a quantity is sent and accepted.¹³ When this structure is used, the transactors contemplate a long-term relationship, but divide it into a series of smaller transactions that the supplier understands will continue as long as its performance and pricing are competitive. In practice, however, these transactional structures are quite similar. Long-term MSAs often give buyers the right to terminate for “convenience” so long as the supplier is reimbursed for its reliance expenses.¹⁴ Many also have “competition-

gate (though not eliminate) the potential for the types of hold-up problems identified by theorists of the firm. They also may reduce the risks faced by a buyer in the event of a supplier’s bankruptcy. See Baird & Casey (2013, 39-42).

¹⁰ Harley-Davidson, *Doing Business with Harley-Davidson* (2015, “Master Supply Agreement” module). The Harley contract is structured as a series of “modules,” each dealing with a different aspect of the relationship.

¹¹ NOE Respondent.

¹² Some MSAs state very clearly that they involve no commitment on the part of the buyer to purchase anything. See, e.g., *Master Supply Agreement between Sun Microsystems Inc. and Mitac International Corporation* (2007, Sec. 3.1) (“[N]either this Agreement nor any Award Letter or Blanket Purchase Order will constitute a commitment to purchase any particular quantity of Products. Sun shall only be committed to purchase Products . . . when Sun has tendered a purchase order to Supplier in accordance with an Award Letter.”).

¹³ Under Article 2 of the Uniform Commercial Code, the statute that governs transactions in the sale of goods, a contract must have a quantity provision to be legally enforceable. U.C.C. § 2-201 (1977).

¹⁴ See, e.g., Deere, *Terms and Conditions*, https://jdsn.deere.com/wps/wcm/connect/71fad4004d1bd535930dbba912093b63/purchasing_terms_and_conditions_can_eng.pdf?MOD=AJPERES. (“Buyer may terminate this Order for its convenience, in whole or in part . . . at any time. If this Order is terminated for convenience, any

out” clauses. These clauses provide that if “a particular part . . . is not a competitive value [for the buyer] in price, performance, delivery, reliability, quality and technology with other equivalent parts of equivalent value, usage, or availability in the world,” the supplier has 90 days to submit an “action plan and time frame” to meet the price and other product attributes.¹⁵ If he cannot or will not meet the competition, the buyer has the right to terminate the contract and buy the part from another supplier. As a consequence of these provisions, the continuation of even long-term agreements depends on the buyer’s satisfaction with the supplier’s performance, not merely on whether the supplier technically fulfills its contractual obligations. As one supplier explained, “you get these MSAs with 28 pages and 34 addendums, but in reality their value boils down to their termination and meet the competition clauses.”¹⁶

Most MSAs are supplemented by additional sources of written obligations. Statements of Work or Service Level Agreements that are negotiated by managers (not lawyers) provide detailed technical specifications, information about the way conformity with product and delivery parameters will be assessed, and penalties for non-performance or sub-standard performance. Additional boilerplate terms are added by the purchase orders. And, perhaps most importantly, these agreements also explicitly incorporate the lengthy sets of terms contained in buyer-drafted Supplier Quality Manuals,¹⁷ Supplier Codes of Conduct (or Ethics),¹⁸ and Environmental Handbooks. Among other things, these handbooks

claim of seller shall be settled on the basis of reasonable costs incurred by seller in the performance of this Order.”).

¹⁵ This clause is taken from an MSA between a large publicly traded supplier and an OEM (names withheld upon request). See also *Long Term Supply Agreement between Deere and Stanadyne* (Aug. 14, 2007) at Cl. VI (“Competition Clause”). Moreover, even when these clauses are not included in the MSA, their terms are the de facto reality facing suppliers. As one supplier explained, even when a long-term contract of a specified duration was used, “most customers have come back in and violated those kind of agreements . . . [they] say, we know we negotiated this deal, however, business conditions have changed and we need your help, partner, to help us out of this situation . . . so, long-term contracts, they sound nice and are nice things to talk about, but we have found that there are problems in our customers adhering to those contracts.” NOE Respondent.

¹⁶ Interview with Manager at a Large Supplier (Dec. 2015).

¹⁷ See, e.g., Deere & Company *Supplier Quality Manual* (JDS6223, rev. 2009-03-12, Sec. 4 “Quality Management System) (hereinafter “Deere QM”) (“[A]cceptance of a John Deere purchase order constitutes acceptance of the requirements of this manual”).

¹⁸ Deere (2015) (setting out suppliers’ obligations with respect to “Child Labor . . . Forced Labor . . . Hiring and Employment Practices, ” including “compensation and working hours,” as well as environmental impact, and other matters).

contain detailed manufacturing process specifications, ethical sourcing requirements, environmental responsibility guidelines, and a description of the roles the buyer's employees are entitled to play in the supplier's production process. Any conflicts between the provisions of these writings are resolved by reference to the agreement's stated hierarchy of authority.¹⁹

MSAs vary in terms of their limitations on court-awarded monetary damages. Many limit damages to the contract price or some low multiple of it, or exclude recovery of lost profits as well as both incidental and consequential damages.²⁰ Others contain no such limitations. In practice, however, buyers are aware that for a variety of doctrinal and practical reasons, they would not be fully compensated if they sued a supplier for breach of contract.²¹

Under prevailing doctrines, buyers would have difficulty proving lost profits with the requisite certainty. They might also be wary of seeking them because doing so would require them to reveal their profit margins which might, in turn,

¹⁹ See, e.g., Ingersoll Rand, Inc. *Global Supplier Quality Manual* (GPO-Q-SW-001 Rev. 1) (2014, Sec. 2.0) ("In the event of a conflict . . . the various components of the agreements shall be given the following precedence (in descending Order of precedence): . . . the Supply Agreement . . . a purchase order . . . an applicable country/region supplement to the buyer's terms and conditions of purchase . . . the buyer's terms and conditions of purchase and . . . the Global Supplier Quality Manual").

²⁰ See, e.g., *Supply Agreement between Dresser-Rand and Ingersoll-Rand* (Oct. 31, 2004) at Cl. 10 (limiting the recovery of these damages even if they were foreseeable); *Manufacturing and Supply agreement between DSM Pharmaceuticals and AAI Pharma* (Jan. 26, 2004) (excluding various types of damages and capping liability during the contract's first year to five million dollars and the liability thereafter to "TWO (2) TIMES THE AGGREGATE PURCHASE PRICE FOR PRODUCT SUPPLIED DURING THE LAST TWELVE (12) MONTHS OF THIS AGREEMENT"); *Sun Microsystems Agreement, supra* note 12 (limiting liability for both torts and breaches of contract, "TO THE GREATER OF TWO MILLION US DOLLARS (US\$2,000,000) OR TWO TIMES (2X) THE TOTAL FEES PAID BY SUN FOR THE PRODUCT OVER THE LIFE OF THE AGREEMENT."); Interview with New York Outsourcing Lawyer (Nov. 2015) (noting that it was very common to cap damages at some low multiple of the contract price in OEM-supplier contracts and that when such caps were not included, OEMs were generally aware that they would have trouble collecting full damages from small or medium-sized suppliers).

²¹ Most of these agreements have separate provisions dealing with damages for breach of warranty and "epidemic failure" of components. An "epidemic failure" is a failure of a component or assembly at a rate defined in the MSA, see, e.g., *Sun Microsystems Agreement, supra* note 12 at Sec. 18.4.1, that greatly impairs the value of the buyer's final product to his customers, typically causing health or safety-related harms that have a damaging effect on the buyer's reputation. Most MSAs require the supplier to insure against such events and name the buyer as the beneficiary of the insurance policy. See, e.g., *Deere and Stanadyne Agreement, supra* note 15 at Sec. XIX "Insurance" (requiring Stanadyne to maintain certain types of product liability insurance for at least ten years following production of the product and noting that the policies must name Deere as a beneficiary and be issued by a company meeting certain financial criteria).

damage their bargaining position in negotiations with other parts suppliers.²² It is also unlikely that courts would fully compensate buyers for the switching costs associated with qualifying a new supplier²³ or the potential damage to their reputation resulting from use of a defective component that causes downstream product malfunction.

Moreover, as a practical matter, the shadow cast by the right to receive money damages (even fully compensatory damages) is far less powerful in these types of long-term or repeat dealing exchanges than it is in discrete exchanges. In these types of relationships, it is not unusual for the filing of a lawsuit for breach of contract to be a relationship-ending event.²⁴ As counsel to one OEM explained, “a supplier gets offended if you, the customer take him to court, it leads to bad blood, he is going to be pissed off at you during the litigation as he is incurring attorney’s fees and having his employees distracted, the distrust that litigation creates just makes continued dealing impossible.”²⁵

A buyer is therefore unlikely to sue for breach of contract (or have a credible threat to sue) unless the amount he can recover (net of litigation costs, switching costs, secrecy costs and reputation costs) exceeds the present value of the marginal benefit of continuing to deal with this supplier, rather than the next best supplier, in the future. Given that the size of each order tends to be small relative to the value of the long-term relationship, suppliers realize that buyers will rare-

²² See Bernstein & Ben-Shahar (2000) (exploring the ways that concern about information revelation in discovery might affect a transactor’s incentive to sue). Counsel to a Large OEM confirmed that a desire to avoid revealing sensitive firm information during discovery in general, and e-discovery in particular, was one of the most important reasons her company avoided litigation. Interview with Counsel to a Large OEM (Dec. 2015).

²³ Some of these switching costs, such as search costs and the costs of putting multiple potential suppliers through their supplier qualification program until a suitable new partner is found, would be relatively easy to quantify. Other potentially significant costs would not. These include the increased coordination and monitoring costs associated with transacting with a new supplier as well as the costs arising from the time it takes the buyer’s personnel to establish the types of connections and understandings with the new supplier’s personnel that facilitate problem solving. Even more problematic from the perspective of a buyer is that in contexts where a buyer’s immediate reaction to a termination would be to temporarily increase his purchases from an existing supplier, a court would likely conclude that switching costs are negligible. However, these costs are, in practice, quite significant. Buyers limit their buy from any one supplier for good reasons, see *infra* discussion accompanying notes 94-98, and at some point in the future would therefore still have to bear the costs of finding a new supplier.

²⁴ The effects of different types of lawsuits, like patent disputes, on the likelihood that parties will continue dealing is less clear.

²⁵ Interview with Counsel to Large Midwestern OEM (Dec. 2015).

ly have a credible threat to sue them in the event of a breach unless the buyer has concluded – perhaps because of a pattern of breaches over time, or the availability of a better supplier – that it is worthwhile to end the relationship.²⁶

Recognizing the effects of lawsuits on the prospect of future dealing suggests that the shadow cast by the threat of court-imposed monetary sanctions on the work-a-day actions of suppliers would likely be weak, even in the absence of damages limitations. Over an important range of purchase order values, buyers only have a credible threat to sue for breach of a *contracting relationship*, rather than a mere *breach of contract*.

Yet even when it is worthwhile to end a supply relationship, buyers prefer to simply terminate the supplier and bear the loss rather than file a lawsuit. As counsel to one OEM explained, as a buyer “you don’t want to get a reputation for suing your suppliers, it will make all of them jittery, we will then be viewed with distrust, others will negotiate for more protections, our world . . . is very small, word gets around.”²⁷ And, as a strategic sourcing manager at a large OEM explained, “Contracts are not about lawsuits, they are about divorce. Sometimes we just want out, making termination provisions the most important part of the deal.”²⁸

Although buyers prefer termination to litigation, their termination decisions are also tempered by both reputational and practical concerns. Buyers fear that if they terminate suppliers too often or at the first sign of trouble, their existing suppliers will be more reluctant to make relationship-specific investments and putative suppliers will view them as less desirable contracting partners.²⁹ Buyers are also concerned that terminating even underperforming suppliers will damage their reputation for treating their suppliers fairly. As a consequence, even when they terminate for cause, buyers are careful to give suppliers enough no-

²⁶ A high-ranked manager at a large supplier explained that his company had no fear of being sued by an OEM for a breach of contract so long as it was doing its best to fix any problems that had been identified. He explained that in his many years working at the supplier he remembered no lawsuits and that he could not imagine an OEM suing unless the supplier was doing something deliberately opportunistic or acting like it simply did not care. Interview with Manager at Large Supplier (Dec. 2015).

²⁷ Interview with Counsel to Large OEM (Dec. 2015).

²⁸ Interview with a High Ranking Strategic Sourcing Manager at a Large Mid-Western OEM (May 2014).

²⁹ Interview with In-house Health Care Outsourcing Lawyer (July 2014). Even firms as prominent as Apple Inc. are concerned about the way they are perceived by their suppliers. See *infra* text accompanying notes 145-146.

tice and enough transitional business to enable them to find other customers. They also tend to compensate them for their reliance expenses even though this is not contractually required.

OEM termination decisions are also influenced by the simple fact that it is often cheaper to help a supplier fix its problems and improve its operations than it is to bear the high cost of switching suppliers. As a mid-western OEM explained, “It takes a lot for a supplier to get in a position where we are going to re-source their business. They almost have to make an effort . . . Re-sourcing business . . . takes a lot of time, a lot of effort . . . If we are noticing problems, we will get some level of materials leadership involvement to see what the issues are.”³⁰

Although OEMs are reluctant to sue or terminate suppliers, most MSAs contain a self-help damage remedy that enables buyers to obtain some monetary compensation without ending a relationship. These remedy provisions (“interior remedies”) typically permit a buyer to withhold payment and impose a small fine when a nonconforming or late tender is made. The fine usually falls far short of compensating the buyer for breach, but is often quite significant from the perspective of suppliers, many of whom operate on a slim (or leveraged) cash flow margin.³¹ In practice, some firms impose these fines whenever delivery is nonconforming, while others only impose them after a problem occurs several times or the supplier ignores a request to provide a plan to eliminate a documented problem. As one procurement manager explained, her firm tended to impose these fines only when the relationship with the supplier was deteriorating, or when she wanted to get the attention of more senior managers who could see to it that the underlying problem was corrected.³² As a consequence, the effect of these fines on work-a-day behavior is likely to vary widely across firms.

³⁰ NOE Respondent. Even in the auto industry where buyer-supplier relationships are notoriously uncooperative, buyers often find it in their self-interest both to be flexible and to help their suppliers, even at their own expense. See Whitford (2006, 65) (“The unwritten policy, seldom discussed publicly by GM [a company with a very bad reputation, is] . . . that the automaker is prepared to help some suppliers rather than risk part shortages . . . GM has hastened payments for parts, guaranteed future contracts, postponed price cuts, offered consulting, and even raised the prices paid for components . . . The automakers do these things because they know it would be time consuming and costly to replace certain parts makers.”).

³¹ This structure might be used as a way of ensuring that the buyer has little incentive to impose the fine unless performance is truly nonconforming.

³² Interview with Procurement VP at Large Medical Machine OEM. See also Stuart et al. (1998, 85) (noting that while Allen Bradley, a manufacturer of factory automation parts, adopted a plan to penalize noncompliance with quality metrics by fining suppliers an amount equal to the cost

In sum, a buyer's threat to seek court-imposed damages for breach of contract is diluted by damage limitations, the structure of these transactions, and the possibility that the supplier will be judgment proof.³³ And, while the threat of termination is nominally quite strong, its exercise is tempered by the high cost of switching suppliers as well as by buyers' desire to maintain a reputation for fairness. Legal remedies are also of limited value to most suppliers. They fear that suing a customer would hurt their reputation. And, as one midsize supplier aptly observed, "You get long-term agreements, but [they are of limited value because] I can't outspend them in court."³⁴

Together, these considerations suggest that the shadow of the law is not, standing alone, strong enough to create sufficient incentives for suppliers to meet their contractual commitments.

2. Hierarchy-Type Methods of Inducing Performance

Against the background of the legal remedies available, OEM buyers, who tend to operate on close to a just-in-time basis and whose production line relies on hundreds of suppliers simultaneously meeting their obligations, are not content to rely on *mere promises to perform* or the shadow effects of potential court-imposed monetary sanctions to induce the level of performance they require. Rather, to increase the likelihood that their suppliers will perform as promised, they have developed a variety of methods that either recreate or approximate the core management techniques associated with intra-firm hierarchy.³⁵

To ensure that products meet their quality specifications, OEMs go to great lengths to regulate the production processes used in suppliers' plants. In some instances, they also exert influence over sub-suppliers' plants.³⁶ Most require

of remedying the defect, it ultimately decided to report, but not collect, the amount of the would-be fine in an effort "to use the figures to foster awareness rather than to assess penalties").

³³ These suppliers tend to operate on a slim cash flow margin. Given that many buyers operate on the basis of something close to just-in-time inventory practices, consequential damages (if not limited by contract as they usually are) might lead all but the largest suppliers to file for bankruptcy.

³⁴ NOE Respondent.

³⁵ See Stinchcombe (1990, 199) (setting out the five elements of "hierarchical intra-firm structure," namely "labor contracts, fiduciary relations, the exercised right to measure and reward performances, standard operating procedures and decision making and dispute resolving meetings," four of which (fiduciary relations excepted) are recreated in OEM-supplier outsourcing agreements).

³⁶ Some buyers confine their oversight to first-tier suppliers. Others put restrictions on which firms their first-tier supplier may buy from and require all sub-suppliers to comply with many of

suppliers to operate their plants in conformity with the quality and manufacturing standards set by the International Standards Organization,³⁷ the Automotive Industry Action Group, or any of a number of other standard setting groups. They also impose additional requirements that are designed to better tailor these standards to their individual company's particular needs.

John Deere, for example, requires its suppliers to operate their plants in compliance with the detailed quality and manufacturing process-related specifications set out in the eighty-eight page John Deere Quality Manual.³⁸ Among other things the Manual sets forth: nine approved process control methods;³⁹ twenty-five approved quality control tools that can each be used at different stages of the production process;⁴⁰ numerous Deere-approved production standards; a requirement that the supplier train internal auditors who understand Deere's requirements;⁴¹ and the requirements for participating in Deere's structured process for the development and introduction of new products consisting of six phases and twenty-one carefully delineated milestones. The manual also specifies many points in the production process where Deere personnel must sign off before the supplier is permitted to move on to the next stage.⁴² Together the re-

the requirements they impose on their tier-one suppliers. In general the tier-one suppliers are responsible for monitoring their sub-suppliers and ensuring that they comply with these requirements. Some buyers require both suppliers and their sub-suppliers to agree to be audited by the buyer at any time. See Ingersoll (2014, 5 "Quality").

³⁷ See, e.g., International Standards Organization, ISO 9001.

³⁸ The quality manual in turn explicitly incorporates the *John Deere Supplier Code of Conduct*, Deere (2015), *John Deere Standards*, and the *John Deere Restricted Materials List*. See also: Navistar (2013) (a 29-page manual covering most of the same subjects as the Deere manual); Ingersoll (2014) (same); Kohler, *Global Supplier Quality Manual*, http://www.kohler.com/corp/supplier/SQM_GPI_3009_Rev1_1_2008.pdf (covering the same subjects as the Deere manual but in somewhat less detail). It is important to note that while the requirements of these manuals are onerous, many of their provisions are simply company-specific refinements of ISO standards. A Deere manager estimated that 80% of the Deere requirements could be categorized this way. Interview with Senior Supply Chain Manager of Large OEM (Apr. 15, 2014).

³⁹ Deere QM (2009, Sec. 24, "Process Control Methods").

⁴⁰ Deere QM (2009, Sec. 25, "Suggested Quality Tools").

⁴¹ Deere QM (2009, Sec. 5.6.1) ("Management Review - General").

⁴² For example, before a new part is produced, a "Design, Process and Assembly Review" must be held. This review includes "a meeting which confirms all expectations of the product or services prior to a physical build. John Deere teams initiate this review as early as possible before tooling release." Deere QM (2009, Sec. 7.2.1, "Determination of Requirements Related to the Product"). Similar meetings must be also held when there are significant changes to existing products. And, when the quality of the product to be produced "cannot be verified by subse-

quirements of Deere's Supplier Quality Manual are so extensive that they amount to Deere dictating the standard operating procedures to be used at its suppliers' plants—procedures that are generally considered a feature of intra-firm hierarchy.

Similarly, Cummins too imposes detailed standard operating procedures on its suppliers. It also goes a step further and appoints one of its own employees, dubbed a Supplier Quality Improvement Engineer ("SQIE"), to both manage and oversee production at each of its suppliers' plants. The SQIE is given broad ranging authority over the way the supplier runs its production line and the types of quality control methods it is required to use.⁴³ Almost any change the supplier might want to make in its sourcing or operations,⁴⁴ as well as the methods used to produce any new products, must be approved by the SQIE.⁴⁵ The SQIE also has the authority to request "data above & beyond the stated requirements in the . . . Handbook if it is deemed pertinent to protect the interests of Cummins,"⁴⁶ and is given broad ranging discretion to deal with situations that are not covered in the Supplier Handbook.⁴⁷

quent monitoring or measurement," the supplier must submit a verification warrant validating the "qualification of processes, qualification of equipment and personnel, and use of defined methodologies and procedures, requests for records and re-validation," after which John Deere reviews the submission and approves or rejects the verification warrant. (Sec. 7.5.2, "Validation of Processes for Production and Service Provision").

⁴³ For example, the SQIE is also given the authority to: designate various engineering standards as "key characteristics" for the purposes of Six Sigma, Cummins (2010, Sec. E(6)(d)); require a supplier to participate in Cummins-developed quality programs, (Sec 8.5); designate the number of samples required for various types of approvals, (Sec. L(3)(d)); require the use of "statistical tools for managing and improving processes" (Sec. 8.6); require the supplier to keep particular types of records (Sec. N(2)); "check the suppliers' actions," taken as part of an audit (Sec. M(2)(b)); waive certain paperwork requirements, (Sec. Q(2)); and set time frames for suppliers to take particular actions related to product development and introduction.

⁴⁴ Among other things, the SQIE must approve: any change in the supplier's supply base (or even the plant the supplier buys from), Cummins (2010, Sec. N(1)(c)); any change in production processes, (Sec. N(1)(b)); and the processes a supplier proposes to use to complete a rework order after defects in deliverables has been discovered. (Sec. M(1)).

⁴⁵ Cummins (2010, Sec. E(24)) ("No new or changed parts can be shipped to Cummins," unless the methods used to produce them have been "approved by a Cummins SQIE.").

⁴⁶ Cummins (2010, G(9)).

⁴⁷ Cummins (2010, I9) ("It is impossible to cover every conceivable situation with a blanket statement or definition. If a situation occurs that is not covered by the Cummins Supplier Handbook, the Cummins SQIE is the point of contact for getting questions answered and situations resolved.").

The broad discretion vested in the SQIE and the authority he has to administratively deal with needed changes, are just the “strong” types of “administrative control[s]” that are well-suited to tasks involving a need for “coordinated adaptation,” and that are typically viewed as hallmarks of the types of hierarchical management techniques traditionally associated with intra-firm production.⁴⁸

Another core type of control associated with intra-firm production governed by hierarchy is control over labor, and with it the ability to reward good performance. OEMs seek to exercise control and oversight over their suppliers’ labor force in many ways. For example, they require particular supplier employees to participate in buyer- (or in some instances supplier-) run training programs⁴⁹ and have buyer personnel (like the Cummins SQIE) present at the supplier’s plant to oversee operations and decide what changes are permissible. They also dictate aspects of their suppliers’ HR policies.⁵⁰ In the past, buyers attempted to assert even more control over suppliers’ labor force by dictating the bonus to be paid to production managers and workers if certain targets were met.⁵¹ However, a Department of Labor ruling led lawyers to advise against this practice, so it

⁴⁸ See Tadelis & Williamson (2013) (describing the functional attributes of intra-firm hierarchy that give “make” an advantage over “buy”).

⁴⁹ See Ingersoll (2014, Sec. 2.1 “Training”) (requiring their suppliers to describe the skill sets needed by their manufacturing personnel and to provide documentation that all employees working on the production-line have been trained to these standards).

⁵⁰ Deere QM (2009, Sec. 6.2, “Human Resources”) (“A supplier shall provide a system of ongoing monitoring of each employee’s education, training and work experience and provide opportunities for training and continuing education to improve employee’s skill level . . . The training shall provide employees with an awareness of the relevance and importance of their activities and how they contribute to the achievement of quality objectives in the business plan. John Deere classes for Supplier Quality Manual, John Deere Standards, and Enterprise Product Delivery Process Supply Chain Integration are available”). Similarly, Honda-US’s involvement in, and oversight of, its core suppliers’ operations includes many functions that closely resemble hierarchy. Honda “reviews the supplier’s sales, overall financial situation, annual business plans, technology development, and investment plans, and . . . reviews measures such as employee turnover, working conditions, safety issues, absenteeism, management attitude and their use of temporary manpower.” See Choi & Hong (2002, 477).

⁵¹ Interview with Outsourcing Lawyer (Nov. 2014). See also Overby (2009) (recommending, in the context of IT outsourcing, that when “cash incentives are paid, ask the supplier to pay a large portion of the money to staff assigned to the customer’s account . . . this helps to attract and retain the supplier’s best people on the customer’s account”). In addition, MSAs frequently have provisions requiring disputes that cannot be resolved by lower-level managers to be discussed at progressively higher levels of both the OEM and the supplier’s organizations, before being submitted to litigation—a practice that echoes intra-firm dispute resolution procedures (see, e.g., *Deere and Stanadyne Agreement*, *supra* note 15 at Sec. XXII(6)(1)).

was dropped. Nevertheless, many MSAs include provisions specifying by name the supplier's employees who will be involved in overseeing the contract. They also include processes for choosing replacements if these employees leave the supplier's employ.

Not every OEM engages in such extensive participation in and oversight of their suppliers' operations. Some buyers reserve this scrutiny for their suppliers of complex or critical parts.⁵² Others engage in intense intervention and oversight, either at the beginning of a contracting relationship or when a new product is introduced but lessen their engagement as the relationship develops.⁵³

Nevertheless, while OEMs differ in terms of their oversight of manufacturing and the degree to which their contracting practices incorporate hierarchy-type governance techniques, the core point is that OEM buyers, many of whom operate on a just-in-time inventory basis, do not simply contract, wait for delivery, accept or reject, and then sue if cure is not forthcoming. Rather, they interact with their suppliers throughout the production, delivery, and quality assessment process to try and catch problems sooner rather than later and work together to solve problems rather than threatening one another with lawsuits. It is in this respect that many of the work-a-day practices in the manufacturing world today echo the findings of Stewart Macaulay's seminal study,⁵⁴ only with a subtle difference: these collaborative relational interactions may look informal, but in reality they are shaped and supported by the provisions of highly formal written agreements, agreed allocations of discretionary authority, and an array of formal contract administration mechanisms. The core contract provisions and contract administration mechanisms that together with the force of network governance,

⁵² Interview with Counsel to Large OEM (Dec. 2015).

⁵³ As one manager at a large supplier explained, firms like Deere spend a lot of time at the plants of new suppliers. As time passes, if quality is constantly good, they will generally lessen their involvement. However, they will still make plant visits on at least a monthly basis and will step up their involvement if the supplier scorecard reveals problems. Interview with Large Supplier (Dec. 15, 2015). See also Osram Sylvania, *Global Automotive Lighting: Supplier Handbook*, <https://assets.sylvania.com/assets/Documents/Supplier%20Handbook.5a5ab44b-f983-49a7-b12e-0cc68a32596c.pdf> at 15 (describing how firms move from "Material Inspection Department Quarantine" status, where incoming product is extensively tested, to "ship to stock" status where it is not); National Instruments, *NI Supplier Handbook*, <http://www.ni.com/company/suppliers/supplierhandbook.htm> at 9 (describing their Dock-to-Stock Program).

⁵⁴ See Macaulay (1963) (quoting interviews that reflect the informality and flexibility of day-to-day contracting behavior and the desire of businessmen to keep lawyers and references to "the contract" out of their transactions).

enable these seemingly informal and highly co-operative contracting relationships to emerge are discussed further below.

II. FACILITATING THE EMERGENCE OF COOPERATIVE CONTRACTING RELATIONSHIPS

Large industrial buyers have created a variety of contract administrative mechanisms and other institutional structures that make it possible for cooperative contracting relationships—that is, relationships where shirking is minimized, relationship-specific investments are adequately bonded, and opportunistic behavior is adequately controlled—to arise and endure largely outside of the shadow of the law. The most important such mechanisms are described below.

1. Preconditions for Cooperation to Emerge

In order for cooperation to emerge, both the buyer and the supplier must decide to cooperate at the outset of their contracting relationship, and each must also believe (or behave as if it believes) that the other will do the same. Thereafter they must each respond to cooperation with cooperation, and defection, or a certain number of defections, with either defection or graduated defection.

A buyer and supplier's initial expectation that their contracting partner will cooperate is created in part by buyer-administered supplier qualification programs.⁵⁵ These programs require potential suppliers to provide: detailed financial information; information about the identity of their other contracting partners and the percentage of their output they sell to each; contact information for both current and past customers;⁵⁶ and documentation that their quality control systems comply with international standards. Buyers also conduct thorough inspections of suppliers' plants and interview both managerial and production-line level employees. In addition to these formal information channels, procurement managers often investigate potential suppliers through their more informal business contacts, through their own employees who may have worked at or with particular suppliers in the past, and through the web and business press.⁵⁷

⁵⁵ For a summary of one such program, see Cummins (2010, Sec. I "Supplier Selection").

⁵⁶ Interview with Counsel to a Large OEM (Dec. 1, 2015); Interview with Supply Chain Manager at Medical Machinery Corporation (Dec. 2014).

⁵⁷ See, e.g., Hewlett Packard, *Supply Chain Responsibility: Our Approach*, <http://h20195.www2.hp.com/V2/GetPDF.aspx/c03742930.pdf> at 4 ("[I]nsight from . . . press articles . . . may also affect our assessments of supplier risk"); Interview with Supply Chain VP

Supplier qualification programs are costly for a buyer to administer and expensive for a putative supplier to complete. Once the supplier has been qualified and the firms begin to transact, both firms will be acutely aware that if either decides to exit the relationship, they will lose this investment and both will also face significant switching costs. As a consequence, both firms are likely to begin the relationship by cooperating and to assume that their contracting partner will do the same.⁵⁸ To strengthen this expectation, at the start of a new relationship, buyers typically place small purchase orders, slowly increasing the order size if performance is up to their expectations. Given this, in the early stages of their relationship, it is unlikely that either transactor would obtain a large enough payoff from defecting to make it desirable to incur the associated costs. Each party is therefore likely to begin early production rounds by cooperating.

2. *Conditions for Maintaining Cooperation*

Once a cooperative contracting relationship has been established, it is most likely to endure if the transactors have a common understanding of what constitutes cooperation and are able to reliably distinguish acts of cooperation from acts of defection. The biggest threat to continued cooperation is the possibility that a transactor will misclassify an act of cooperation as an act of defection and thus set off a series of actions and reactions that lead to the disintegration of the contracting relationship.⁵⁹ Given the detail in these contracts and the fact that

from a Large Health Care Machine Company (July 2013) (noting that before doing business with a supplier she would check it out with her contacts in other firms the supplier dealt with as well as with other individuals she knew in the supplier's local area).

⁵⁸ Fichman & Levinthal (1991) (suggesting that "favorable prior beliefs, trust, goodwill, financial resources or psychological commitment," give rise to an "initial stock of assets," that create a honeymoon period, (defined as a "suspension of the threat of a relationship ending,") at the outset of commercial relationships, but providing limited empirical support from business settings, outside of one study that found such a period to exist at the outset of auditor-client relationships but that needs to be viewed with caution as the negative market signal sent by firms who change their auditors early in a relationship might well account for the effect).

⁵⁹ Bernstein has explored the role played by clear contracts, institutional efforts to promote common knowledge, and the availability of formalist adjudicators whose decisions are predictable in sustaining cooperation in the shadow of the cotton industry's well-developed private legal system, see Bernstein (2001). Similarly, Bozovic & Hadfield (2015) recognize that written contracts can support, or in their terms "scaffold" cooperation even when they are rarely (and are rarely expected to be) legally enforced. However, in their account (unlike the one presented here) both lawyers and the content of contract law play a central role in enabling the written agreement to scaffold cooperative exchange. As they explain, cooperation can be achieved because "a distinctive body of *contract law* and practice [that includes "formal legal doctrine" as well as the "norms and rules of contract analysis"] coordinates the interpretation of ambiguous and multi-dimensional events by the parties to a contractual relationship," thereby enabling "those events

buyers expect strict compliance regarding quality, on time delivery, and a host of logistics-related requirements, the potential for relationships to unravel due to either a supplier's misunderstanding of a buyer's needs or a buyer's mistaken classification of operational outcomes is omnipresent; yet buyers have developed ways to reduce both of these risks and moderate their responses to bad outcomes in ways that are designed to facilitate continued cooperation without opening the door to opportunism.

A. Reducing the Risk of Misunderstanding

Large buyers take many steps to reduce the likelihood that suppliers will misunderstand either their contract requirements or their unwritten expectations. John Deere's supplier portal, for example, includes webinars and PowerPoint presentations that explain the requirements of its quality manual and highlight the "critical" requirements, the violation of which will "put the supplier at the highest risk of violating the Purchase Order Terms and Conditions."⁶⁰ Caterpillar runs a Supplier Development College, which offers a variety of on-boarding classes for new suppliers designed to increase their understanding of Caterpillar's contract requirements and unwritten expectations.⁶¹ Suppliers are also encouraged to improve their operations by attending Caterpillar University which offers courses on the latest industrial techniques, regulatory requirements, and quality control methods.⁶² Navistar takes a somewhat different approach. It re-

to be classified in a binary fashion as 'breach' or 'not breach,'" and reducing the "variance associated with the estimates of the likelihood that contracting events will be classified as breach or not (5)."

⁶⁰ Deere QM (2009, p. 3). Other buyers produce manuals to enhance suppliers' understanding of their contract requirements. See, e.g., GE Energy *Supplier Quality Resource Book* (Mar. 2006) (providing an accessible overview of GE's quality requirements but warning that it "is not a substitute for a rigorous contract and document review by the supplier as part of the process to fulfill an order").

⁶¹ Courses offered include "Supplier Expectations Workshop" and "Understanding Purchase Order Terms and Conditions."

⁶² See, e.g., Supplier Development College, <https://supplierconnect.cat.com/wps/portal/catconnect/SDC> (describing on-boarding classes for new suppliers that teach them how to do business with Caterpillar; courses on aspects of manufacturing ranging from asbestos control to lead to crane safety; and a class on "Meeting Customer Expectations." Similarly, John Deere provides "classes for the Supplier Quality Manual, John Deere Standards, and Enterprise Product Delivery Process and Supply Chain Integration." See Deere QM (2009, Sec. 6.2, "Human Resources"). See also Navistar (2013) (noting that a training module is available online for each stage in the Supplier Quality Life Cycle Management requirements and that managers are required to complete them).

quires its suppliers to confirm in writing that they understand all Navistar specifications before accepting any business.⁶³ It also mandates that its suppliers' key personnel participate in various web-based training programs, among them a program designed to "take our quality expectations beyond statements of expectation to training in the important aspects of quality that will deliver to our expectations."⁶⁴ Harley too has "a large variety of training types for [its] suppliers," including "a highly formalized methodology for instructing suppliers that can last up to three months," as well as "training for the Master Supply Agreement[]." ⁶⁵

Although these formal channels for conveying information are important, suppliers also come to understand their buyers' needs and expectations through the manager-led process of negotiating product specifications and the provisions of Service Level Agreements and/or Statements of Work, including the key performance indicators that will be used to assess performance. The information learned in these negotiating sessions about the culture and expectations of each company is viewed by many transactors as being important to the successful conduct and governance of these relationships. Some consider it to be more even important than the final written agreements.⁶⁶

B. Reducing the Risk of Misclassification

Buyers have also created a formal contract administration mechanism, the Supplier Scorecard, to rate each supplier in terms of their compliance with relatively objective performance metrics as well as the buyer's assessment of the

⁶³ Navistar (2013, Sec. 3.3) ("Suppliers must ensure that Navistar requirements are defined and understood prior to acceptance of business . . . and return the Supplier Quotation Feasibility Commitment to confirm understanding of Navistar requirements. When an aspect of requirements is not understood or agreed, suppliers must provide a written request for explanation of the unclear points to the appropriate Navistar Engineer, the supporting Navistar Supplier Quality Representative, and Navistar Procurement Representative. If no questions are raised, Navistar assumes that suppliers understand the requirements and will adhere to them.").

⁶⁴ Lisboa & Osborne (2014). Navistar also produces webinars explaining its quality manual and requires its suppliers to complete them. See <http://www.navistarsupplier.com/IntegratedSupplierQuality/QualityDocuments.aspx>.

⁶⁵ ManagementParadise.com, *Supply Chain Management of Harley Davidson* (Jan. 8, 2011), <http://www.managementparadise.com/forums/elements-logistics/212454-supply-chain-management-harley-davidson-inc.html>.

⁶⁶ See, e.g., Karten (2003) ("A properly established SLA fosters improved communication between the two parties . . . the very process of *establishing* an SLA helps to strengthen communication, so that the parties come to better understand each others' needs, priorities, and concerns.").

quality of the contracting relationship more generally.⁶⁷ The core metrics that make up the bulk of most scorecards are on-time performance, cost, quality, and customer service. The buyer uses these metrics to create a quarterly composite score, which it then uses to determine the business opportunities (if any) that it will make available to the supplier in the next quarter.

By rating on a quarterly rather than purchase-order-by-purchase-order basis, buyers are less likely to overreact to isolated bad outcomes. Under the scorecard system, the highest-rated suppliers are eligible for new business. Those with adequate ratings keep their existing levels of business but are expected to improve. And suppliers with lower ratings are warned that their order quantities will decrease if improvements are not quickly made. Many buyers accompany these warnings with consulting services designed to improve their operation.⁶⁸ It is only after a few rounds of low ratings that suppliers are terminated.⁶⁹ Among other things,⁷⁰ this mechanism enables buyers to reward suppliers for their performance by allocating them increased business.⁷¹ It also enables them to impose carefully graduated monetary sanctions on them for non-performance without having to end the contracting relationship to do so. These sanctions do not benefit the buyer,⁷² and may be costly for him to impose because he will have to se-

⁶⁷ See, e.g., National Instruments' Supplier Scorecard Assessment Criteria (2011) (defining the allocation of points on the NI supplier scorecard and indicating that the only subjective element, the score for "customer service and support," was allocated only 10 out of 100 points.").

⁶⁸ Milligan & Carbone (2000, 65) (stating that, according to Harley, "[i]f a supplier receives a bad report card, Harley-Davidson takes action. If the Supplier is not doing well, we send resources in to help him.").

⁶⁹ See Richard Menhorn, NCR: Supplier Scorecard Procedure (June 25, 2010), <http://www.ncr.com/wp-content/uploads/ncr-supplier-scorecard-process.doc> (describing the operation of the NCR company's scorecard).

⁷⁰ In firms that are multi-sourced, these scorecards give the buyer an inexpensive way to benchmark suppliers' performance against one another.

⁷¹ The prospect of these non-legal rewards like increased business or a public announcement of partner level status that the buyer can use to solicit business (an action that would otherwise be forbidden under the terms of most master agreements), play an important role alongside non-legal sanctions in supporting these agreements—most notably in creating incentives for more than mere compliance with contract provisions.

⁷² These "sanctions" are very costly to the seller and do not benefit the buyer (and are in fact costly for it to impose), so they are best understood as a form of decoupled damages. See Polinsky & Che (1991, 562) ("The optimal system of decoupling makes the defendant's payment as high as possible. Such a policy allows the award to the plaintiff to be lowered, thereby reducing the plaintiff's incentive to sue—and hence litigation costs—without sacrificing the defendant's incentive to exercise care.").

cure other sources of supply to cover reduced quantities. He is therefore unlikely to impose them unless the supplier has actually underperformed.⁷³

OEMs and suppliers meet quarterly to discuss the scorecard. Buyers share their perspective on the scorecard and suppliers are encouraged to ask questions, dispute various ratings, and describe their plans to improve in critical areas. These discussions increase transparency. They make it less likely that a supplier will respond with a defection of its own if the buyer makes an errant judgment about the quality of its performance. Even if the supplier ultimately disagrees with the buyer's assessments and explanations, he is nonetheless much less likely to conclude that its scorecard rating (provided the buyer provides a plausible rationale) is an independent defection on the part of the buyer. The scorecard, together with the quarterly business review, serves as a useful, though far from foolproof, way of heading off a mistaken series of echoing defections that has the potential to lead to the deterioration or end of an otherwise beneficial contracting relationship.

The incentives created by the scorecard are reinforced by buyers' practice of granting status designations, like "partner-level"⁷⁴ or "certified" supplier to those suppliers who continue to meet or exceed specified performance criteria. Some of these designations come with valuable benefits, such as better or more extensive information sharing, more frequent contact, dock-to-stock status,⁷⁵ and the award of new business even when they are not the lowest bidder so long as they are within a specified range of the lowest bidder.⁷⁶ In addition, it is not un-

⁷³ In addition, in contexts where the buyer multi-sources the good, the scorecard creates a tournament among the suppliers, and puts them in a prisoner's dilemma vis-à-vis the revelation of some types of information. For example, when a supplier knows that the buyer can compare his statements about the lowest achievable error rate with those of other producers, he is more likely to be truthful.

⁷⁴ See, e.g. John Deere, *Achieving Excellence: A Strategy for World-Class Supplier Relationships*, (n.d.) https://jdsupply.deere.com/apps/ae/docs/brochure_inserts/english/english_brochure.pdf at 4.

⁷⁵ Sloan Global Supplier Quality Manual, [https://www.sloanvalve.com/GQA_SUPPLIER_MANUAL_7-2013_\(Rev_6\).pdf](https://www.sloanvalve.com/GQA_SUPPLIER_MANUAL_7-2013_(Rev_6).pdf) (7-2013 Rev. 6, 2013) at 4 (noting that "certified" suppliers get 'dock-to-stock' status . . . [and are] exempt from the receiving inspection process at Sloan facilities").

⁷⁶ At the Ariens Corporation, for example, certified suppliers receive "preferential treatment from the OEM . . . While [they] are expected to come up with cost saving ideas, they enjoy partnership style relationships with Ariens, particularly in engineering. In bidding, if they can come within five percent of the lowest bid, they get the order." See Rickert et al. (2000, 17). See also Aberdeen Group, *The Supplier Performance Measurement Benchmarking Report*,

common for supplier qualification questionnaires to ask if the supplier is a “certified” supplier to any of its customers,⁷⁷ which suggests that obtaining certified status may be a valuable business asset.

To ensure that suppliers who reach the highest status category have an incentive to maintain high-level performance, firms have created supplier-of-the-year awards. These awards are covered in the business press⁷⁸ and are considered an indication of quality by other buyers when they are selecting suppliers.⁷⁹ By announcing the award publicly, the buyer confers a benefit on the supplier. The supplier can then use the award to solicit other business, something that it might otherwise be prohibited from doing. The confidentiality provisions in MSAs often forbid suppliers from disclosing even the existence of a contracting relationship without the buyer’s consent.⁸⁰ Sometimes the mere fact that a supplier sells to Deere is an important business asset as other putative buyers will know that

http://www.lyonsinfo.com/_resources/aberdeen_spms_report.pdf (Dec. 2002) (noting that “enterprises often give new business proposals (i.e., “bids”) from preferred suppliers additional weight, allowing preferred suppliers to win new business without necessarily being the lowest priced offer.”).

⁷⁷ See, e.g., Supplier Questionnaire for Ceredyne Corp., <http://www.ceradyne.com/uploads/supplierdocs/662011102210AMSupplier%20Questionnaire.pdf> at 4 (asking prospective suppliers “is your facility a certified supplier for any other customer . . . if yes please provide customer name if possible.”).

⁷⁸ Despite widespread coverage in the press, empirical evidence on the effect on suppliers’ businesses of winning these awards is conflicting. Compare Hendricks & Singhal (1996) (looking solely at buyer quality focused awards given to public companies and finding no abnormal returns on the day after the announcement) and Hendricks & Singhal (2001) (using a different methodology and finding that winning a buyer-granted quality award resulted in a 28.24% “mean percent change in operating income.”). See also Azadegan & Pai (2008) (concluding, based on data from the semi-conductor sector, that buyer-given “awards are an indicator of long-term supplier performance,” and that “operational awards show direct association with ROE, [while] product awards show direct association with sales growth.”).

⁷⁹ Interview with Supply Chain VP from a Large Health Care Machine Company (July 2013) (explaining that while not determinative in the selection of a new supplier, she would sometimes give the receipt of these awards some weight); Interview with Deere Supply Chain Manager (same).

⁸⁰ See, e.g., *Supply Agreement between John Deere & Titan Tire Company*, (Apr. 15, 2011) at Cl. 22 (“[N]o press release, public announcement, confirmation, or other information regarding supply orders for the Products under this Agreement, or the fact that negotiations for new products or increased quantities for existing order are occurring, will be made by Titan without the prior written approval of Deere or by Deere without the prior written approval of Titan.”) See also *Supply Contract between Phoenix Technologies Ltd. & Intel Corp.* (Dec. 18, 1995) at Sec. 8.2 (providing for similar confidentiality).

the supplier has learned to run an efficient plant by virtue of Deere's oversight and assistance.

Buyers also obtain a prospective benefit from these status designations and awards. Once it is announced that a supplier has reached partner status or is the Supplier of the Year, a supplier who fails to win similar accolades in future years will suffer reputational harm. Knowing this, suppliers who win these coveted designations have an incentive to continue to perform at a high level in the future.

The MSAs also have provisions designed to improve the accuracy of the buyer's assessment of the supplier's performance and to enable the buyer to better understand the causes of any nonperformance. They give buyers the right to: inspect the supplier's plant with or without notice, review and audit its quality control systems⁸¹ and quality control reports,⁸² and audit its books and/or other records.⁸³ While books and records are always subject to manipulation,⁸⁴ the

⁸¹ See Deere QM (2009, Sec. 8.2.2, "Internal Audit") ("Deere reserves the right to conduct a quality system assessment at the suppliers' facility . . . Deere would expect access to a supplier's personnel, documentation, . . . and test facilities"); see also *Primary Contract Manufacturing Agreement between JDS Uniphase and Fabrinet* (January 1, 2008) at Sec. 10.1 (setting out broad inspection and quality control rights as well as requiring "reasonable access to its staff including technical staff, to determine the identity and scope of Improvements and New Technology whether solely or jointly developed by Supplier, which JDSU reasonably believes Supplier has not adequately disclosed in accordance with this Agreement").

⁸² See, e.g., Deere QM (2009, Sec. 4.2.4, "Control of Records") ("[A]ll quality records" including but not limited to twenty five enumerated types, must be "readily accessible upon request by a John Deere representative.").

⁸³ See, e.g., *Fuel Supply Agreement between Petro Truckstops and Petro Stopping Centers* (March 9, 2007) at Sec. 3 ("Each party shall . . . maintain and make . . . books and records available for at least two (2) years after the termination of this Agreement for possible inspection, copying, extracting and/or audit by the other party. Each party . . . shall have the right not more than once every six calendar months to review and, through an independent certified public accounting firm . . . conduct audits with respect to the books, records, and all other documents and materials in the possession or under the control of the other party relating to this Agreement."). More generally, these provisions give buyers the right to get almost all of the information they would get through civil discovery without having to file a lawsuit.

⁸⁴ See, e.g., NOE Respondent (explaining, when asked if they give up their costing information to their largest OEM buyers, "somewhat, we take our material . . . then we just have a dinosaur way of doing labor costs . . . we don't break it down. The upshot is that [the OEM] can't see the margins"); NOE Respondent (explaining that when they were compelled to give their costing data to a large OEM, "we've done it to such an extent that they had an extremely hard time understanding it," and noting this was a deliberate tactic). NOE Respondent (explaining that while the overall margins they reveal across all parts they make for a buyer are roughly accurate, the data related to a particular product are less accurate to avoid push back from buyers).

provisions nevertheless give buyers important (albeit not perfect) information that they can use to more accurately determine if, and in some instances why, sellers are violating certain types of contract provisions.

OEMs care deeply about the reasons for poor quality, late delivery, or any other type of subpar performance. The reason for a breach influences their response.⁸⁵ Breaches due to one-off manufacturing glitches are largely ignored, unless they are frequent. Breaches due to systematic production problems (even large ones) that the buyer thinks can be remedied are initially met with offers of technical assistance,⁸⁶ sometimes at the buyer's expense. And opportunistic breaches or breaches caused by operational difficulties that cannot be remedied are typically met with the harshest responses, including termination for cause.

To enable buyers to determine the causes of a particular breach, most contracts give them the right to demand a "root cause analysis," when a problem arises. A root cause analysis is "a tool designed to help identify not only *what* and *how* an event occurred, but also *why* it happened."⁸⁷ A properly conducted root cause analysis should also be able to determine whether the type of process problems that caused the undesirable outcome are amenable "to specif[ic] workable corrective measures that [will] prevent future events of the type observed."⁸⁸

Together, these audit/oversight and root cause provisions reduce the likelihood that a buyer will mistakenly classify a one-off industrial mishap as defec-tion and thus set off a chain of reactions that either terminate or severely damage

⁸⁵ See, e.g., Harley Davidson (2003, "Late Delivery Module") (providing that a supplier who delivers late will not be liable for any "of H-D's incidental, special or consequential damages (such as lost profits) in connection with a product delivery delay," so long as "(1) Supplier's delay in delivering . . . is not the result of an intentional breach of this Agreement by Supplier and (2) upon recognizing that it will or probably will be unable to deliver . . . Supplier promptly in-forms H-D and promptly and continuously uses its best efforts to deliver all late Products as quickly as possible.") .

⁸⁶ As one OEM explained, even when there are "big problems," his firm's "philosophy is to work with them [the supplier] to fix the problem. Obviously if they can't fix it over some period of time or it continues to be one that comes back. Then the partnership we thought we had, we don't have anymore so we have to find another option." NOE Respondent.

⁸⁷ Rooney & Vanden Heuvel (2004).

⁸⁸ Rooney & Vanden Heuvel (2004). Supplier Qualification questionnaires used during the supplier qualification process sometimes ask whether the supplier has established root cause analysis procedures. See, e.g., *AAF International Supplier Questionnaire*, Rev. 6/00, <http://www.aafatinoamerica.com/aafintl/supplier%20questionnaire%20pdf.ashx.pdf>. In addition, some buyers reserve the right to be present during and participate in the conduct of the root cause analysis. See, e.g., Carlisle (2013, 22).

the parties' relationship. They also make it possible for these contract provisions to condition on information that in their absence would not be observable and would only be verifiable through the filing of a lawsuit and the conduct of civil discovery. As a consequence, these provisions both expand the range of commitments that can be extra-legally enforced and significantly reduce the likelihood of a buyer filing suit or terminating a supplier based only on his best guess of what civil discovery would reveal.⁸⁹ Together with buyers' inclination to assist suppliers in solving production problems before sanctioning them, these provisions add a measure of stability to these contracting relationships.

The contract administration mechanisms described here are very effective in creating and sustaining cooperation; yet they require suppliers to disclose a great deal of information and place few constraints on buyers. As a consequence, even after contract provisions and contract administration mechanisms have done their work, buyers remain able to take advantage of suppliers once contractual relationships have begun. Among other things, they can press for costly changes to production processes, demand price reductions (other than those that are required or contemplated as part of the contract),⁹⁰ and/or deviate from the expected order quantity. In addition, as discussed further below, as these relationships move from make-to-spec to more complex relationships where suppliers take responsibility for design, co-design or aspects of sub-assembly, numerous other risks either emerge or become more salient, leaving suppliers (and in certain circumstances buyers) quite vulnerable.

Given that suppliers are aware of the buyers' opportunity to engage in hold-up or other types of opportunism, buyers who do not intend to behave opportunistically would be better off if they could credibly bind themselves not to do so. One way that buyers attempt to limit the price they pay for the hold-up risk that cannot be eliminated by contract is to limit the amount of the harm they can inflict on a supplier. This in turn strengthens the supplier's ability to resist the

⁸⁹ The provisions are necessary because even in contexts where it is likely to be in the supplier's interest to reveal this information, in the absence of these provisions the information would likely remain private. The individual employee who would have to release the information as well as the lawyer who would likely have to sign off on its release would face tremendous personal "second guess risk" from authorizing the release of this information, and therefore would be unlikely to do so. However, when these types of provisions are included they remove the second guess risk associated with revealing the information. For a comprehensive discussion of the ways that second guess risk affects lawyers, see E. Bernstein (2001).

⁹⁰ OEMs expect suppliers to cut costs each year. Some MSAs state the percentage reduction expected, others are silent.

buyer's opportunistic demands. Buyers do this by refusing to contract if the amount they anticipate wanting to purchase is more than 20%-30% of the supplier's revenue.⁹¹ As a purchasing manager of a large medical machine OEM explained, her firm sometimes experienced large changes in the downstream demand for its products and wanted to be able to vary its buy when this occurred or when one of their suppliers got a lower scorecard rating.⁹² However, the firm wanted to be able to do this without causing its suppliers severe financial harm or pushing them into bankruptcy.⁹³ Doing either of these things would likely damage the buyer's reputation, make its other suppliers less likely to make relationship-specific investments, and force the buyer to bear the cost of switching to another supplier when demand increased. Indeed, a major benefit to OEMs of outsourcing is the ability to shift part of the risk of downstream changes in product demand to their suppliers. In some contexts, suppliers may be better able to bear this risk than an internal firm division that produces only for intra-firm consumption. The cost to a supplier of redeploying manufacturing assets to another purpose is likely to be less than the cost to an internal division of a firm of doing so. Unlike a supplier, an internal division would lack contacts with other purchasers and would not have a developed sales infrastructure.

Buyers obtain additional governance benefits from keeping their buy under 20%. First, it strengthens the credibility of the buyer's threat to either reduce its buy or terminate a particular supplier due to low scorecard ratings. Second, when buyers keep the buy percentage low, the supplier's threat to exit the rela-

⁹¹ For the twelve OEMs in the NOE Study, information about the percentage of their largest suppliers' revenue that their contracts amounted to was available for eight of them. For the companies that follow, the percentage of the three publicly traded suppliers with the largest percentage of revenue related to the OEM contract is given in parenthesis: Navistar (33%, 16%, 6.2%); Arvin Meritor (99.11%, 16%, 1.2%); Ingersoll-Rand (10.5%, 5.1%, 3.1%); John Deere Horicon (14%, 13%, 6.2%); Harley Davidson (12%, 2.2%, 1.58%); Osh-Kosh (8%, 4.4%); Kohler (24.08, 10%); CNH (.15%, .10%). Whitford (2006). These measure look only at the percentage of output of tier-one suppliers. They do not capture any larger dependency that a tier-two approved supplier may have by virtue of supplying more than one of a particular buyer's tier-one suppliers.

⁹² Interview with Supply Chain VP from a Large Health Care Machine Company (July 2013).

⁹³ One large OEM confirmed that they wanted their suppliers to sell to many others so that "they will remain healthy," even when demand goes down. It explained that if a supplier offered to deal exclusively with them they would say "that is a bad idea. We would like to be a substantial customer to you, but we don't want you to be dependent on us." NOE Respondent. Similarly, another OEM when asked whether he wanted his suppliers to diversify their customer base said, "Yes from a technology standpoint, from a supplier health standpoint . . . our goal is to be with the best suppliers in terms of quality and tech, we encourage our suppliers to work with others, we have suppliers that work with our competitors, but we manage it." NOE Respondent.

tionship if the buyer behaves opportunistically is more credible, which in turn creates an incentive for the buyer not to misbehave.

Explaining this practice, one procurement manager said that she wanted to be able to give her “supplier a giant nudge or kick in the pants,” but did not want the power to “be able to hit him with a hammer,”⁹⁴ because at the end of the day, given how fast word of bad actions gets around, doing so would likely jeopardize her relationships with her other suppliers. And, as a manager at a large supplier explained, the OEMs wanted to shy away from deals that would make them appear “accountable”⁹⁵ for the success or failure of a supplier’s business. Nevertheless, even when the buy percentage is kept low, additional constraints on buyer behavior are needed. As discussed further in Part IV below network governance also plays an important role in achieving this.

3. Conclusion

In sum, buyers and suppliers have created an array of contract governance mechanisms that enable them to create highly cooperative contracting relationships for goods made to the buyer’s specification. However, these mechanisms, standing alone, will be much less effective in maintaining cooperation when transactors enter into more complex undertakings such as those involving joint or supplier-led innovation. They will also be largely ineffective in enabling new transacting partners to engage in these types of undertakings at the outset of their contracting relationships.⁹⁶ In transactions involving prospective innovation,

⁹⁴ This company also asks its suppliers to “give the names of your most important COMPANIES for reference, including percentage of your sales to them,” and to opine on “what would be the mutual dependence that you perceive to be acceptable in a business relationship with Company.” Quality Management System, Supplier Information Form from Large Company (confidential).

⁹⁵ Interview with Supply Chain VP from a Large Health Care Machine Company (July 2013).

⁹⁶ Three leading contract theorists, however, have suggested that contracts *can* endogenously create trust-based social capital from scratch, even in contexts in which the *initial* transaction between the firms is a complex agreement involving innovation that has important non-contractable elements. See Gilson, Sabel & Scott (2010); Gilson, Sabel & Scott (2009); and Gilson, Sabel & Scott (2012). These authors look with great care at the language of ten “prototype” agreements and conclude that “parties today often treat trust as endogenous, as an object of contracting rather than as a precondition . . . [and] write contracts in which they manifestly intend to establish a deeply collaborative relation, where *little or none* existed before.” Gilson, Sabel & Scott (2010, 1404). They identify two types of contract provisions that they view as providing the agreement’s most important contract governance mechanisms. First are provisions that are designed to operationalize a “commitment to an ongoing mutual exchange of information designed to determine if a project is feasible, and if so, how to best implement the parties’ joint objectives.” Gilson, Sabel & Scott (2010, 1403). Second are “contract referee mechanism[s]” that require una-

nimity for key decisions and require that disputes be referred up the chain of command if they cannot be resolved at lower levels (1403).

However, a closer look at the contracting relationships surrounding the ten prototype contracts reveals that pre-existing relational social capital between the transactors and/or structural social capital (that is, the network position of the firms) was present in all but one of these contracting relationships and may therefore, as the theory discussed in the text suggests, also have played an under-appreciated role in the governance of these agreements and in transactors' willingness to have entered into them.

Three contracts involved companies who had been doing business with one another long before the studied transaction, giving sufficient time for relationship-specific social capital to have developed. Prior to the *Phoenix Technologies Ltd. & Intel Corp. Supply Contract*, *supra* note 80, the parties had been co-developing products since at least 1988, see, Ed Scannell, "Phoenix Ships MCA-Compatible BIOS," *InfoWorld* (Aug. 1, 1988). They also had strong connections to common customers as both supplied the same makers of generic personal computers, see Michael W. Miller, "IBM PC Clones Multiply Amid Price Battles," *Wall St. Journal*, (June 17, 1986). Moreover, on the day this agreement was signed, Intel purchased 11 million dollars of Phoenix Stock, thereby introducing an additional and potentially important governance mechanism into the mix. See *Phoenix Technologies Ltd. & Intel Corp. Common Stock and Warrant Purchase Agreement*, (Dec. 18, 1995). Similarly, the parties to the *Allstate Insurance Co. & Acxiom Corp., Data Management Outsourcing Agreement* (March 19, 1999), had been dealing with one another for at least six years prior to this contract. See Funding Universe, *Acxiom Corporation History*, <http://www.fundinguniverse.com/company-histories/acxiom-corporation-history/>. And, prior to the *John Deere & Co. & Stanadyne Corp., Long Term Agreement* (Deere and Stanadyne 2001), which these authors suggested "help[ed] to establish and maintain a long-term supply arrangement," (Gilson, Sabel & Scott 2009, 458), it is important to note, especially for the purpose of understanding contract governance, that the transactors had been doing business for at least 50 years. See American Society of Mechanical Engineers, *Rotary Distributor Fuel Injection Pump: National Historic Engineering Landmark* (April 1988), <https://www.asme.org/getmedia/488b1889-a13e-4c03-9bee-5f33d309fbba/131-Diesel-Fuel-Injection-Pump.aspx> at 3. Moreover, the extent to which innovation was contemplated as part of this particular contract as opposed to in the context of the parties' contracting relationship writ large, is unclear given that the preamble to this contract stated that "[t]he scope of this agreement covers current products purchased from Stanadyne Corporation. The products in-scope are the current DB rotary mechanical products, fuel filtration products, standard and RSN pencil injection nozzles, DE10 pumps and the Series 250 Fuel Injection system" (*Deere and Stanadyne Agreement*, *supra* note 15 at 2).

Another three contracts took place between a buyer and an entity it had recently spun off, again suggesting that pre-contractual relationship-specific social capital was present. For background on the *Apple Computer, Inc. & SCI Systems Inc., Fountain Manufacturing Agreement* (May 31, 1996), see *New York Times*, "Apple Agrees to Sell a Big Macintosh Plant," (April 5, 1996); For background on the *American Axle & Manufacturing Inc. & General Motors Co., Component Supply Agreement* (June 5, 1998), see Joseph P. Ritz, "New Firm Offers to Buy GM Saginaw Plants Facilities in Buffalo, Tonawanda, St. Catharine's Affected; UAW Officials Angry," *The Buffalo News*, at A1 (Sept. 10, 1993) (six former GM employees sat on the American Axle board of directors); and, finally, for background on the *Boeing Co. & Spirit Aero Systems Inc., General Terms Agreement*, (June 30, 2006), see Boeing Company 2005 Annual Report, <http://investors.boeing.com/investors/financial-reports/default.aspx> at 28.

Two of the contracts were biotech alliances. As discussed in the text, *infra* text accompanying notes 125-133, the structure and governance of these types of agreements is strongly affected by

the parties might not have a clear idea of what is to be produced, how to manufacture it, or how to assess whether the finished part meets their overall expectations. As a result, there will be fewer if any metrics they can use to objectively assess one another's performance, thereby increasing the risk of misunderstanding, conflict and relationship breakdown. Yet the very governance frameworks that cannot themselves govern these more complex deals can, when implemented over time in a particular contracting relationship, create the conditions in which they can thrive. As discussed further below, these frameworks can facilitate the creation of trust-based relational social capital that, in combination with the force of network governance, can create the conditions that make it more likely that buyers and suppliers will be able to more readily identify and more successfully bond these types of increasingly complex and innovative value-creating undertakings.

III. SOCIAL CAPITAL AND RELATIONAL GOVERNANCE

another sort of social capital, namely structural social capital, see *infra* text accompanying note 8, that has been demonstrated to be a potent governance force in biotech transactions. However, inter-personal social capital was also present in both of these transactions. In the *Pharmacopeia & Bristol-Myers Squibb, Collaboration and Licensing Agreement* (Nov. 26, 1997), the Director of Biology at Pharmacopeia had spent the previous seven years at Bristol-Myers as a high-ranking scientist. See Sue Rodney, "Pharmacopeia, Inc. Announces Senior Management Appointments," PR Newswire, (Nov. 01, 1996). <http://search.proquest.com/docview/450067348?accountid=14657>. In the *Warner-Lambert Co. & Ligand Pharmaceuticals Inc., Research, Development and License Agreement* (Sept 1, 1999), two members of Ligand's board of directors had previously held high-ranking executive positions at Parke-Davis, a Warner subsidiary and the division responsible for administering this agreement. In addition, Ligand had done business in the past with Parke-Davis before it was taken over by Warner and as part of this transaction it purchased \$2.5 Million in Ligand stock. The LA Times, *Ligand, Warner in Research Collaboration*, (Sept. 2, 1999), <http://articles.latimes.com/1999/sep/02/business/fi-5903>.

The remaining co-development contract, the *Nanosys, Inc. & Matsushita Electric Works, Ltd., Development Agreement* (Nov. 18, 2002), dealt with nano-technology. It involved a business strategy on the part of the R&D-centered company Nanosys that could not work without entering into a significant number of strategic alliances with large partners who could produce and market products using their technology. The need to partner with these large firms (some of whom transacted with one another and whose employees often moved from firm to firm) situated the transaction in a network of firms that further reduced the likelihood that Nanosys would intentionally breach the contract they entered into with their first large partner, Matsushita Electric Works.

Finally, the remaining contract did not involve any co-development; it was merely a sale of an airplane to an end user. See *AVSA S.A.R.L. & New Air Corp., Airbus A320 Purchase Agreement* (Apr. 20, 1999).

1. Introduction

The governance frameworks created by MSAs and the contract administration mechanisms used to implement them promote the growth of trust-based relationship-specific social capital in three important ways. First, as discussed above, they create conditions that support the emergence of repeat dealing relationships which in turn grow relational capital that is valuable to firms.⁹⁷ Second, these frameworks facilitate the types of investments, norms and interactions that are commonly associated with the emergence of trust—defined as “the expectation that both actors will behave in a mutually acceptable manner, including an expectation that neither party will exploit the other’s vulnerabilities.”⁹⁸ And third,

⁹⁷ For sources documenting this effect, see papers cited in Elfenbein & Zengler (2014).

⁹⁸ Schilke & Cook (2015, 277). There is another prominent definition of trust in the social capital literature that if used to understand commercial contracting would be problematic. As a leading social capital theorist explained “trust is a relationship with someone (or something if the object of trust is a group, organization, or social category) in which contractual terms are incompletely specified. The more unspecified, taken-for-granted the terms, the more that trust is involved.” Burt (2005, 93). However, there are reasons to question the suggestion that a more complex or detailed contract is an indication of a less trusting relationship and the implicit assumption that the terms specified in a written agreement will necessarily be complied with through the force or shadow effect of the law.

First, a detailed contract may be the outcome of a negotiation process that was deliberately structured to build trust-based social capital. In these settings, a longer contract (if it results from these trust-building activities) may indicate more rather than less trust. Indeed, lawyers negotiating information technology outsourcing contracts have developed a carefully structured and iterated negotiating process that typically lasts six months to a year and artfully combines most of the elements identified by social capital theorists as contributing to the accumulation of trust. By the time the contract is ready for signature, the parties have learned about one another’s business culture and had an opportunity to see if their corporate cultures are compatible (a process sometimes referred to as mutual value discovery); have been faced with working through a series of increasingly difficult issues involving both concrete problems and judgment calls; and have developed an ethos of transparency in their interactions—interactions that are structured to include not only lawyers and executives, but also, after the initial negotiating sessions, the members of the business teams that will implement the contract. At the conclusion of the negotiations, care is taken to emphasize that “trust” is central to the transaction, but that careful writings are also needed to memorialize understandings in case either party experiences a change in key personnel. (Interview with Outsourcing Lawyer, Mar. 2014). See Information Services Group, *IT Infrastructure Outsourcing Helps Shell Lower Cost, Drive Increased Efficiency* (2013) (providing an example of an IT outsourcing contract where a similar mutual negotiation/value discovery process was used to negotiate and structure a deal).

Second, when dealing with a trusted contracting partner, it is easier to access the operational benefits of clarity and specificity (benefits that arise both within and across the contracting firms) without the downside risk of inflexibility that is often associated with detailed provisions. If you trust your partner to be flexible in contexts where implementing precise provisions does not make business sense, you are more likely to use precise terms. Third, when lawyers draft con-

many aspects of these frameworks memorialize contract administration routines and firm policies that are similar to those that have been shown to increase organization-to-organization trust in relationships between automakers and their suppliers.

A. *The Effect of Prior Dealings on Current Dealings*

The importance and impact of prior dealings on buyers' decision-making about whom to deal with and on what terms, has been empirically established in the industrial procurement context; it has been shown to be important even in transactions involving almost no uncertainty or relationship-specific investment.

tracts, they rarely start from a blank slate. Rather, they begin with a template, and adapt it to the individual transaction. Detail that is not necessary, but also not harmful, tends to remain in these agreements. This weakens the connection between detail and trust that would be more likely to exist if contracts (as the sociological and organizational behavior literatures seem to assume) were drafted anew for each transaction and included only those provisions the parties themselves viewed as necessary. Moreover, even if the contracts were drafted anew, the lawyers would insist on the inclusion of provisions that would be unnecessary from the parties' private (and perhaps trust-based) calculus, simply because lawyers would likely want to avoid second guess risk. See E. Bernstein (2001). Fourth, clear contracts can also support trust-based relationalism by providing focal points that support norms of reciprocity. For reciprocity norms to function properly, the transactors need to have at least a rough mental account of who is the giver and who is the taker. See Hart (2008). When these mental accounts become unbalanced, or transactors' perceptions of their balance fall out of alignment, transaction breakdown is more likely to occur. Recognizing this dynamic suggests that there is no necessary connection between contract detail and trust. Fifth, transactors who have dealt with one another on a repeat basis over a long period of time might also choose to include more detailed descriptions of the desired performance, even if their trust in one another were either increasing or remaining constant. The managers who negotiate the detailed provisions in scope of work and service level agreements might (if they are good agents) memorialize in writing the things they learned about one another's expectations, needs, and operations, for two reasons. First, to reduce the interruptions caused by changes in personnel—in which case the length of the contract might be an indication of the importance of their tacit understandings. And, second, to ensure that accurate information about the deal flows through both their own and their partner's hierarchy of operations in a consistent way. In addition, at the outset of the relationship, the employee who set up the deal (the "broker," see note 124 *infra*) might want to keep its terms vague, so that he remains indispensable to the administration of the deal and therefore better able to capture the individual returns associated with brokerage. Over time, however, he will want to find new opportunities to broker, so he would be expected to be more willing to specify the operational aspects of the deals he helped to create. See, e.g., Argyres, Bercovitz, & Mayer (2007) (demonstrating in the context of a long-term supply contract in the electronics industry that the Statements of Work became more detailed over time and came to reflect what the parties learned from one another). Finally, the assumption that specified provisions will be complied with due to the force of the law is simply false. The mere fact that something is specified in a contract, even completely specified, does not mean that it will be done, unless there is some other force motivating performance, like reputation, morality, or coercion of other sorts.

The most carefully conducted study that looked at the effect of prior dealing on partner selection and transaction price, examined the reverse auctions conducted by the procurement department of a large mid-western industrial firm (Elfenbein & Zenger 2014). In advance of the bidding, all auction participants were prequalified as being able to supply the good in question at the desired quality level. The goods were primarily “commodity parts that can be well specified in a contract.”⁹⁹ After bidding closed, corporate procurement managers chose the winning bid in consultation with “officers and divisional staff” (who had in turn consulted plant managers). This process was designed to reduce “the scope for private benefits or friendship ties to influence these outcomes.”¹⁰⁰ As the authors explained, the “collaborative nature of the selection process, transparency of alternatives and decisions, and organizational norms requiring careful justification of supplier choice all worked together to limit the influence of private benefits or personal affinity on partner selection” (Elfenbein & Zenger 2014, 228).

The study found that “the value created by past exchange is economically meaningful” (Elfenbein & Zenger 2014, 228). In particular, the authors’ estimates indicate that increasing relationship length from the mean in the sample (roughly seven months) to one standard deviation above the mean (roughly 30 months) “is associated with an increase in willingness to pay of 8.5% (95% confidence interval: . . . 5.2-14.9%).”¹⁰¹ It also found that the greater the risk of ex-post exchange hazards or the more complex the goods, the greater was the effect of past dealing on the premium the buyer was willing to pay. More broadly, the authors

¹⁰⁰ Elfenbein & Zenger (2014, 223) (noting that this institutional feature provides “additional confidence that the results . . . [of the study] reflect the relationship’s true economic value to the firm.”).

For a study that also found a large effect of prior transactions on willingness to transact again in the context of strategic alliances, see Gulati & Gargiulo (1999, 1453–54) (drawing on “longitudinal data on strategic alliances in a sample of American, European, and Japanese organizations in three industries over a 20-year period,” and demonstrating that “the probability of a new alliance between specific organizations increases with their prior mutual alliance, common third parties, and joint centrality in an alliance network.”).

¹⁰¹ Elfenbein & Zenger (2014, 237). Similarly, a European-Israeli Mechanical Engineer/Businessman in the specialty machine business, a context where the functional abilities of the machine to be produced can be specified, but what is to be produced cannot be described, reported that the companies he has dealt with in the past are willing to pay him at least a 15% premium over the lowest bidder, due to the quality of his past performance (Interview, Sept. 2014).

concluded that the study confirmed the “consensus across a wide range of literature . . . that continued and repeated exchange generates a valuable asset that is both ‘created and leveraged through relationships’ that provides assurances against the threat of ex-post opportunism, and that facilitates adaptation and problem solving.”¹⁰²

B. Trust-based Relational Social Capital

The social capital literature identifies a number of different aspects of exchange relationships that create the conditions under which interpersonal trust is most likely to arise. These include: the exchange of information;¹⁰³ the formation of personal ties among the firms’ employees (and their associated character assessments and loyalties);¹⁰⁴ the making of reciprocal relationship-specific investments;¹⁰⁵ the acquisition of experience in successful problem solving;¹⁰⁶ and the

¹⁰² Elfenbein & Zenger (2014, 224) (internal citation omitted). Another study that explores the connection between repeat dealing, trust, and transaction terms is Gulati (1995a, 85). Drawing on a study of strategic alliances “formed between 1970 and 1989 in the biopharmaceutical, new materials and automotive economic sectors by American, European and Japanese firms,” the paper explores the use of equity in strategic alliances. It finds “strong evidence that repeated alliances between two partners are less likely than other alliances to be organized using equity,” a finding that it attributes to the “role of inter-firm trust that emerges from repeat alliances between the same partners.” However, this conclusion should be viewed with caution. As the paper itself points out, while interview evidence supports the conclusion that trust explains the decreased likelihood of taking an equity stake in repeat transactions, the quantitative empirics presented cannot rule out the possibility that this is due simply to the fact that “two firms will prefer a non-equity alliance only when they already have an equity alliance . . . [because] once two firms share one hostage it obviates the need for additional hostages” (Gulati 1995a, 94).

¹⁰³ See Gulati & Gargiulo (1999, 1455) (“Beneath the formalities of contractual agreements, multiple informal interpersonal relationships emerge across organizational boundaries, which facilitate the active exchange of information and the production of trust that fosters inter-organization cooperation.”).

¹⁰⁴ Gulati & Gargiulo (1999, 1445) (concluding based on extensive interviews among participants in strategic alliances that “personal relationships among key individuals have played a crucial role in producing trust between organizations in Japanese industrial groups . . . and in contractual relationships.”).

¹⁰⁵ Roden & Lawson (2014) (drawing on a survey of UK firms to demonstrate that when buyers and suppliers make bilateral relationship-specific investments (adaptations), they create relational capital).

¹⁰⁶ See, e.g., Knoppen & Christiaanse (2007, 228-229) (presenting case studies of supply relationships in which “partners admitted that trust had grown over the years, by living through good and bad times together,” and concluding that “the satisfactory resolution of negative themes or crises fostered trust,” and illustrating it with an example in which the parties’ contracting relationship “substantially improve[d] through the occurrence of a severe quality problem.”).

emergence and observance of norms of reciprocal flexibility.¹⁰⁷ Although social capital theorists differ in the emphasis they place on each of these potential sources of trust, the frameworks used in OEM-supplier relationships support all of the conditions enumerated above that are associated with trust creation.

Information Exchange Suppliers provide buyers with a great deal of information as part of the supplier qualification process. They are also required to: share detailed costing data when bidding on a part, provide quality control reports at regular intervals, permit the buyer to audit their books and records, and provide the buyer with timely information relevant to the operation of their production line. Buyers have few information disclosure obligations apart from a duty to provide non-binding rolling forecasts on a monthly or quarterly basis. However, the most important exchanges of information for the purposes of building trust may be the transfer of more tacit information¹⁰⁸ that occurs when buyer and supplier employees interact with one another in person.¹⁰⁹

Personal Ties These contracting frameworks encourage the formation of personal ties between the buyer and supplier's employees in numerous ways. Among them are: the quarterly business review meetings where buyer and supplier management meet; the many social events and conventions buyers host for their suppliers; the interactions on the production floor required by quality manuals; and the interactions that take place when buyer employees visit supplier premises to help implement process improvements or when suppliers' engineers take up residence at the buyer's offices to help with product design.¹¹⁰

Reciprocal Relationship-Specific Investments OEM supplier relationships involve reciprocal relationship-specific investments even before the parties enter into their

¹⁰⁷ See, e.g., Gulati (1995a, 92) (suggesting that through ongoing interactions firms learn about each other and develop trust "around norms of equity.").

¹⁰⁸ See Gulati (1995a, 90 nn. 1) (defining tacit knowledge as "knowledge that . . . typically resides in patterns of relationships, norms, information flows, ways of making decisions, and other organizational factors.").

¹⁰⁹ However, it is important to note that it is not clear whether information sharing leads to trust or trust leads to information sharing, See Dyer & Chu (2003, 66) ("Trust . . . appears to have a mutually causal relationship with information sharing that also creates value in the exchange relationship.").

¹¹⁰ See *infra* text accompanying notes 148–153 (describing Harley's Supplier Council and Resident Engineer Program). See also Cummins (2010, Sec. e(2) and K(7)) (describing the company's Advance Product Quality Planning Process that "brings the supplier's management, Cummins, Inc., plant management, engineering, purchasing and others together at different stages of the process.").

first contract because participation in supplier qualification programs is costly to both the buyer and the supplier. These required investments continue into the early stages of the relationship. The buyer bears the cost of sending either outside consultants or its own development team into the supplier's plant to help it improve its operations. In turn, the supplier must bear the costs of making the changes in their plant and operating procedures that are needed to meet the requirements set out in the buyer's quality handbooks.¹¹¹

Problem Solving Buyers and suppliers are likely to acquire experience solving problems during the make-to-spec stage of their relationships. Although these transactions are generally cooperative, problems nevertheless arise and buyers' needs change in ways that require contractual adjustments. Dealing with these problems gives the firm's employees a chance to work through problems before they become overly complex, and enables them to gain familiarity with the organizational cultures of one another's firms.

Norms of Reciprocity Finally, a number of OEM practices encourage norms of reciprocity that are commonly said to "begin[] with a starting mechanism, which may take the form of a gift or other acts of assistance."¹¹² These include: the teams of consultants and process engineers that OEMs often send to their suppliers' plants at their own expense;¹¹³ the classes offered by firms like Deere and CAT to help suppliers improve their operational abilities; the institutionalized supplier development programs like JDCrop¹¹⁴ that help suppliers improve their operations and develop cost-saving ideas; and the common practice of not imposing fines for subpar performance even when performance is clearly deficient. More generally, the clarity in these contracts makes them a good reference point around which norms of reciprocity are likely to grow (Hart 2008).

¹¹¹ Reciprocal relationship-specific investments are also encouraged and required as part of tooling agreements. See Harley-Davidson (2003, "Tooling Management Module") ("Harley-Davidson highly recommends that the production supplier be integrated into the design process for new tooling. ").

¹¹² Dyer & Chu (2000, 264) (providing an overview of the writing in sociology and anthropology that supports this view of how reciprocal norms are established.).

¹¹³ Dyer & Chu (2000, 265) (finding that in transactions between automakers and their suppliers "the greater the assistance provided by the buyer to the supplier, the greater the supplier's trust in the buyer. ").

¹¹⁴ For a description of one such program, see Stegner, Butterfield, & Evers (2015) (describing the program at John Deere).

Together, these aspects of the contracting frameworks used in procurement contracts, and the types of interactions they directly or indirectly encourage, create the conditions under which social capital theorists suggest trust is most likely to emerge.

Although the role of trust in OEM-supplier relationships has not been studied quantitatively, quantitative studies of automaker-supplier relationships have demonstrated the economic benefit of trust in that context.¹¹⁵ Moreover, the interview-based study of Midwest OEMs¹¹⁶ and their suppliers suggests that trust-based relationship-specific social capital plays an important role in work-a-day contractual behavior and influences firm decision-making in ways that likely affect the value of these commercial relationships.

Among the most important and consistent viewpoints expressed in the interviews were: interpersonal relationships make it easier to solve problems;¹¹⁷ trust leads suppliers to reveal more accurate costing information to buyers;¹¹⁸ buyers are more willing to share technological advances and do co-design with suppliers they trust;¹¹⁹ suppliers were more willing to make relationship-specific investments when they trusted buyers;¹²⁰ and suppliers actively seek reputation

¹¹⁵ Dyer & Chu (2003, 63–64) (presenting the results of an empirical study of the effect of trust on transactions costs in transactions between U.S., Japanese and Korean automakers and their suppliers, which shows that “there is a strong correlation between automakers’ trustworthiness and profit performance.”).

¹¹⁶ For a description of this data source, see Whitford (2006).

¹¹⁷ One supplier noted that upon entering into a contracting relationship, it tried to “spread like a virus,” forming interpersonal relationships across all levels of the buyer’s operation, because having strong relationships across a buyer’s operations, including “manufacturing, engineering, management to some extent, marketing . . . all over the place . . . helps us solve problems.” NOE Respondent. And an OEM explained that it was sometimes worthwhile to buy from a long-time partner even at a higher price because when you need a favor like a very fast turnaround “they do it” and are willing to “jump through hoops” because they know you will be back. NOE Respondent.

¹¹⁸ NOE Respondent. One supplier noted that it was the sole source of a product to a trustworthy OEM that never bid out its designs and that they shared costing data and worked harder to improve products. The supplier attributed its willingness to share its data to its relationships not only with buyer’s procurement personnel but also with people throughout the buyer’s hierarchy, from the president to the production line. The supplier noted, however, that they would not share this type of information with another OEM who dual-sources the product and whom they do not really trust. NOE Respondent .

¹¹⁹ See *infra* text accompanying note 163.

¹²⁰ See Rickert et al. (2000, 33-34) (discussing and quoting suppliers’ views of the connection between OEMs’ past behavior, trust, and their willingness to make relationship-specific investments). One supplier noted that they were willing to make relationship-specific investments to

information about buyers.¹²¹ These findings are consistent with suppliers' widely held perception that turnover in buyer personnel was detrimental to the smooth functioning of relationships. Suppliers repeatedly noted that this turnover made them less likely to share accurate costing information and more reluctant to participate in buyer-sponsored supplier development programs (Rickert et al. 2000).

Although the trust and loyalty created by interpersonal social capital are often valuable,¹²² they may also be costly. Managers might favor certain suppliers out of feelings of friendship or loyalty, even when they are not the best supplier available. Friendship might also lead managers to soften the type of criticism often needed to improve production methods.¹²³ However, firms have developed ways to **detect and mitigate these costs**. Supplier scorecards and the quarterly business reviews held to discuss them function as an intra-buyer firm mechanism to counter any distortions introduced by personal loyalties between buyer and supplier representatives. The scorecards provide objective metrics on supplier performance that are accessible to and regularly reviewed by higher-level managers who are not as personally involved in management of the particular relationship. They therefore limit the ability of a supply chain manager to hide supplier under-performance. In addition, if relational ties become problematic,

get more business from John Deere but they were not willing to do so with the auto companies. It explained that the auto companies "talk partnership . . . but they could be out [of the relationship] in a second, so we are very careful about the investments we make for their parts. We have learned anything can go." NOE Respondent.

¹²¹ NOE Respondent. One supplier who was considering working with Deere's supplier development program explained that before deciding whether to participate, he wanted to visit the plant of another local supplier that had been part of the program. He explained that, among other things, he really wanted to know if Deere in fact shared cost savings 50-50 as they claimed.

¹²² See, e.g., Cousins & Menguc (2006, 615) (presenting a survey-based study of UK firms that found that when buyers attempted to socialize their suppliers through "supplier conferences, regular meetings (formal and informal), telephone conferences, and site visits," there was "a strong direct relationship between the level of the supplier's socialization and contractual conformance"); see also Dyer & Chu (2011, 31-32) (discussing quantitative studies of trust that demonstrate its economic value).

¹²³ Over time, long-standing relationships may be affected by the same type of group-think that can pervade an internal division of a firm. However, these risks are attenuated in the outsourcing context. The supplier will continue to interact with other buyers. These other buyers will learn things from other suppliers of the same or similar goods, thereby obviating the emergence of group-think across their supply relationships. Indeed, while individual firms have come up with internal structures that are designed to avoid group-think—such as Steve Jobs's practice at Apple of having multiple teams working on the same general idea in isolated pods—the avoidance or mitigation of group-think may be one of the major benefits of outsourcing.

supply chain managers can easily depersonalize exchanges by rotating their purchasing staff.

1. Inter-Organizational Trust

The contracting frameworks adopted by large OEMs may also play a role in creating inter-organizational trust. Studies of automaker-supplier relationships have shown that suppliers have more trust in firms that have standardized supplier qualification programs, clear rules about the conditions under which a firm wins business, well-run supplier development programs, and, perhaps most importantly, consistent procurement attitudes and processes writ large (Dyer & Chu 2011). The many supplier handbooks, supplier development programs, approved material lists, standard sets of terms and conditions, and clearly defined and understood procurement practices adopted by firms like Deere and Harley may well play a similar role in helping these firms establish trusting relationships with their suppliers. One purchasing manager, who praised Deere and Harley for their consistency in their supplier relations, explained that another OEM who was a subsidiary of a foreign corporation was viewed as being considerably less trustworthy since it had a very different culture and did not operate in predictable ways. This observation closely paralleled the observation of one of the suppliers in the automaker study who explained that “we cannot trust U.S. automakers as much as Japanese automakers because whenever they bring in new management, we get a whole new set of procurement rules and policies. The rules of the game are constantly changing. With Japanese companies we don’t seem to have the same problems” (Dyer & Chu 2000, 277).

In sum, the frameworks that support the creation of relational social capital are expensive to create and maintain. Nevertheless, buyers often opt for relational governance even when an arms-length contract could adequately govern their deal. Relational capital increases flexibility, enables the parties to rely on reciprocal informal adjustments being made over time, and leads to the sharing of information that can greatly reduce production costs. Moreover, as discussed further below, one reason firms opt for relational contracting is that many of the interactions among employees that successfully build relational social capital also increase the likelihood that employees of both firms will be able to identify additional value-creating transactions between their firms—a benefit that may well justify even the very significant costs of relational governance.

2. Brokerage (Seeing Value-Creating Opportunities)

The types of governance structures that OEMs use to facilitate cooperation and build inter-organizational trust and trust-based relational capital do far more than increase transactors' perceptions of the likelihood of performance. They also create the conditions under which some employees of both firms are, over time, more likely to identify either additional value-creating transactions or cost-reducing product, process, or materials changes.

As the contracting relationship matures and the employees of both firms interact through development programs, conferences, and the meetings held in the regular course of administering their contracts, some are likely to begin to trust one another. As this trust builds, employees of both firms become increasingly likely to share information. And, as they become better acquainted with one another's operations, culture, and specialized language they will be better able to appreciate the meaning and importance of this information.¹²⁴ This exchange of both tacit and explicit information, in turn makes it more likely that the firm's employees will be able to identify additional ways to create joint value—that is, to engage in what social capital theorists call “brokerage.” As these opportunities are identified, the length of the perceived shadow of future dealing between the transactors lengthens, which, in turn, makes it less likely that either will breach or behave opportunistically in their current dealings.

John Deere's supplier development philosophy implicitly recognizes the connection between buyers slowly deepening their relational ties with suppliers and the prospect of value-creating brokerage. Deere strives to “mature its providers over time,” even those that initially provide “commodities,” or “generic” parts. It uses suppliers' behavior in these early deals to decide whether it is worthwhile to deepen its relationship with them. If these relationships do not go well, they are terminated within a year. In contrast, “if things go well, trust accumulates between buyer and seller and they can enter into a deeper relationship that generates more value for both of them” (Moore et al. 2002, Appendix A, p. 128). In Deere's view this “value flows from increasing data exchange and [using] joint

¹²⁴ See Burt (2005, 17) (“Opinions and behaviors within a group are often expressed in a local language, a dialect fraught with taken-for-granted assumptions shared within a group. The local language makes it possible for people in the group to exchange often-repeated data more quickly . . . [yet] the more specialized the language within groups . . . the greater the difficulty in moving ideas between groups.”); Harley Davidson produces a list of Harley acronyms to assist its suppliers in understanding their communications with the company. See Harley-Davidson (2003, “Acronyms”). Of the 154 acronyms listed, 37 have Harley-specific meanings, 6 have more than one general meaning that can easily be confused with the Harley meaning and the rest are widely used and can be found in a simple Google search.

work to improve the performance and cost of products and processes” (128). It also has the advantage of “train[ing] providers in Deere’s culture, making it increasingly easy for them to respond to Deere’s needs in a reliable way” (129), so that Deere will eventually be able to give them far broader responsibility within the contracting relationship, including responsibility for design and/or innovation.

More generally, the recognition that relational governance can increase the likelihood of value-creating brokerage suggests that contract provisions and contract administration procedures that dictate how often buyer and supplier personnel at particular levels of the organization interact, together with the breadth of the confidentiality constraints each firm imposes on its employees vis-à-vis employees of its contracting partners, may be quite important to both the value of future deals and the governance of present deals.

IV. STRUCTURAL SOCIAL CAPITAL: NETWORK GOVERNANCE

Wholly apart from the type of relationship-specific social capital discussed above, which might build too slowly to be useful in many transactional contexts,¹²⁵ there is another type of social capital, “structural social capital,” that derives its value from the positions of a firm and its contracting partner in a relevant network of firms. A network is simply a set of connections between individuals or between organizations (here, firms). These connections can arise from prior deals between firms or prior social and business connections between their employees. When these connections exist they “establish[] a link that lowers the costs (or raises the accuracy) of subsequent communication” (Robinson & Stuart 2006, 243). These links enable firms in the network to convey “privileged information about one another to other network members . . . [thereby] affect[ing] a counter-party’s reputation among future business partners” (243). As a consequence, when a transaction is embedded in a network, the hostage value of repu-

¹²⁵ See Burt (2005, 94-97; 104-105) (suggesting that opportunities for brokerage are often identified before the trust needed to take advantage of them has developed). See also Vanpoucke, Vereecke, & Boyer (2014, Table 2) (demonstrating through six longitudinal studies of contracting relationships that sufficient trust to support moving from the “exploratory” stage—that is, the make-to-spec stage where there is no expectation of long-term dealings—to the “expansion” stage which is “triggered by a high level of trust,” and involves some degree of integration between the parties, took from about four to fifteen years, and that an additional five or more years were needed for full knowledge sharing).

However, in some contexts, even when this relationship-specific social capital is absent, contracts can be adequately bonded by interorganizational trust which can grow relatively quickly. Dyer & Chu (2000, 275).

tation is much greater than when a transaction is between two firms with few, if any, connections to other firms in the relevant market (248 fig. 1). It is through its effects on the flow of information that structural social capital can function as a network-based contract governance mechanism.

To understand the ways that network governance influences transactions, it is useful to look at its effect on contract compliance and governance writ large. It is also interesting to explore the way it interacts with contract-related decision making and contract provisions on a more micro level. As discussed further below, structural social capital may be harnessed to achieve a variety of ends. Most notably, it can reduce the need for firms to employ costly governance mechanisms and can make it possible for transactors to use (and reliably bond) contract provisions that condition on information that would not be either observable or verifiable to a court or other adjudicatory forum.

1. Biotech Alliances and Network Governance in a Market Context

The power of network governance has been most carefully documented in the context of biotechnology alliances. One study looked at over “38000 alliance transactions between pharmaceutical firms and biotechnology research firms,” a transaction type where “agreements are fraught with moral hazard, asymmetric information, and other contracting problems.”¹²⁶ The network ties employed in the study were the “stock of past alliances” among the studied firms (243). It found that both firms’ positions in the relevant network of firms significantly affected the size of the equity stake (which is generally regarded as a key governance mechanism in alliance transactions) that the large pharmaceutical company took in its alliance partner.

There are two important dimensions of a firm’s position in a network.¹²⁷ The first is centrality.¹²⁸ Conceptually, a firm is said to be central in a network if it has “a large number of connections to firms, which, in turn, are each linked to many other firms” (Robinson & Stuart 2006, 249). In theory, the more central a firm is, the more deeply embedded it is in the pattern of communication in the network, and the greater is its power to quickly and effectively spread the word

¹²⁶ Robinson & Stuart (2006, 243). For the mathematical definition of centrality used to quantify it in the study, see Robinson & Stuart (2006, 252).

¹²⁷ For an intuitive pictorial illustration of these two aspects of network position, centrality and proximity, see Robinson & Stuart (2006, 248 fig. 1).

¹²⁸ Robinson & Stuart (2006, 247) (“a property determined by the overall shape of the network”).

if its alliance partner acts opportunistically.¹²⁹ The biotech alliance study found that “when one of the counterparties is deeply embedded within [the network, that is, central to it,] the deals they consummate are less likely to involve equity participation and typically entail lower amounts of equity when equity is used” (269).

The other important dimension of two firms’ position in a network is their proximity to one another. Two firms are said to be more proximate “when fewer intermediaries separate two counterparties.”¹³⁰ In theory, proximity should decrease the equity stake taken for two reasons. First, “because more proximate [firms] have either transacted directly in the past or have engaged in transactions with an overlapping set of counterparties,” they have far more information about one “another’s reputation and abilities than do members of a more distant pairing.”¹³¹ Second, proximity increases the ability of the large pharmaceutical firm to sanction the smaller biotechnology firm if it misbehaves. This effect arises because the biotechnology firms’ “set of current and past collaborators are its more likely [set of future] trading partners” (Robinson & Stuart 2006, 249). As a consequence, proximity gives the large pharmaceutical firm a more credible threat to sanction any misbehavior on the part of the biotech firm,¹³² which should lead to a lower equity stake being taken. Consistent with these predictions, the study found that as “proximity increase[s], equity participation (measured by size and propensity) diminishes.”¹³³

More broadly, the study documents the ability of structural social capital to function as a contract governance device with the potential to sanction, and

¹²⁹ As Robinson and Stuart explain, “[t]he economic value of centrality lies in the ability of centrally positioned agents to reduce incentive conflicts after the contract has been initiated by threatening (implicitly) to sanction opportunistic behavior” (2006, 249).

¹³⁰ Robinson & Stuart (2006, 247) (emphasizing that “[p]roximity is a property of a pair of firms”).

¹³¹ Robinson & Stuart (2006, 249). In this context, given the many non-contractable aspects of a deal, transactors are highly unlikely to deal with partners they view as affirmatively untrustworthy at the outset.

¹³² The centrality of the biotech firm may also affect incentives since “[c]entral firms tend to have widely known reputations and to be well regarded by other members of the network.” Because “sanctions are particularly costly for those with valuable reputations,” these more central firms have more potential future opportunities that they will lose if negative information about them flows through the network than do less central firms. Robinson & Stuart (2006, 250).

¹³³ Robinson & Stuart (2006, 242). Although the study confirmed that both centrality and proximity affected the power of network governance, it is important to note that it found the effect of centrality was five times as large as the effect on proximity.

therefore to deter, opportunism. This suggests that if the lawyers structuring these deals want to avoid the cost of using an equity stake as a governance mechanism where it is unnecessary, they need to know more than the “bilateral transaction history of the firms in question.”¹³⁴ In particular, they will need to know the pattern of past alliances and connections in the deal-relevant network because “opportunism is mitigated by a counterparty’s reputation among [and position in relation to] potential future contracting partners, not just through its reputation with preexisting partners” (Robinson & Stuart 2006, 244).

The study also demonstrates that network governance can and does work, even in contexts where detailed information about transactors’ underlying behavior is *not* widely available.¹³⁵ It can even be effective in contexts where the information that is available publicly – namely outcomes – is too noisy to convey useful information to putative contracting partners given the low probability of success in such ventures and the wide variety of reasons they fail.¹³⁶ Indeed, one

¹³⁴ Robinson & Stuart (2006, 244). In other words, the type of transaction pictured in the bottom lefthand box in the figure in note 7 *supra*.

¹³⁵ This was true of the firms in the biotech study, a context in which “the details of a[] [firm’s] conduct in its past alliance cannot be observed publicly” and “information about past behavior is transmitted across private information links.” Robinson & Stuart (2006, 246). In addition, the study found that both proximity and centrality were more powerful predictors in alliances between privately held firms about which less public information is available. This suggests that it was information carried by the network that influenced the structure of the alliance.

¹³⁶ Interview evidence from studies of strategic alliances in a variety of industries and high-tech contracting contexts is consistent with the biotech study’s findings about the force of network governance and the existence of the reputation-transmission channels it identified. This evidence suggests that managers routinely rely on network-provided information (including aggregate assessments of their potential partner’s business reputation) and their potential partner’s position in the relevant network of firms when selecting alliance or contracting partners. As one manager explained, “In some cases . . . our [existing alliance] partner may refer us to another firm about whom we were unaware . . . An important aspect of this referral business is of course about vouching for the reliability of that firm. Thus, if one of our longstanding partners suggests one of their own partners as a good fit for our needs, we usually consider it very seriously.” Gulati (1993, 56). Interviews with managers also support the idea that reputation information not only flows through networks, but also travels quickly. As one manager of a high-tech firm explained, “If we were to have a major breakdown in our relationship with HiTech Computer, within thirty days that would be well known throughout the industry in New England.” Larson (1992, 76). Similarly, Gulati (1993, 90) reports the comments of a senior manager at Cadence Technologies who implicitly revealed the interplay of reputation information and network position when he explained that:

We had included ODI in our final list based on its technological competence. But then we were interested in knowing more about their business integrity and support structure. Once we realized that they had prior relationships with IBM and Ericsson, with whom we also had prior technology partnerships, we called manag-

of the main advantages of network-based governance and one of the key insights of the network literature is that the information that flows through networks need not be either directly observable to, or verifiable by, the recipient to have an impact on the way the recipient views the subject of the information.¹³⁷ As a consequence, the network can facilitate the imposition of non-legal sanctions for misbehavior on the basis of types of information that cannot be used by either the legal system or other types of adjudicatory fora to do so.¹³⁸

ers within those two and had extensive conversations about ODI. It turned out that IBM had in fact earlier picked an ODI competitor, whom we were also considering, and subsequently reversed their decision and picked ODI. These factors were very important in our decision to pick ODI.

Additional examples abound.

¹³⁷ Several leading contract theorists, see note 96 *supra*, have largely dismissed the role of network governance in the context of biotech alliances. They explain that “[w]hile we recognize the role of reputation as one element of switching costs, we remain skeptical about the extent to which reputation can carry the weight [the Robinson and Stuart Biotechnology study] assign[s] to it. Most important, it is extremely difficult for third parties, however well connected, to observe the conduct of the parties. Suppose a venture fails. Given the very low likelihood of finding a successful drug, the most reasonable inference is that the outcome is the result of bad luck, not poor skills or bad faith.” Gilson, Sabel & Scott (2009, nn. 123). This criticism, however, assumes that the network can only transmit information about the success or failure of the project. It does not fully appreciate the breadth of the information networks can convey (including information that is neither observable nor verifiable) about the transactors and their behavior. Indeed, this aspect of information transmission was taken into account by the authors of the biotech study, who recognized that it is because information across networks is sticky and variable that network position has such an important impact on contract governance (Robinson & Stuart 2006, 246–47). See also Gulati & Gargiulo (1999, 1445–46) (concluding, based on interview evidence and a quantitative study of alliance transactions that “the information that flows through the alliance network is not only trustworthy, but also timely,” and noting that according to one manager “we and our prospective partner must know about each other’s needs and identify an opportunity for an alliance together in a timely manner . . . Our partners from past alliances are one of our most important sources of timely information about alliance opportunities out there, both with them and with other firms with whom they are acquainted.”).

¹³⁸ The observation that information will be conveyed through networks does not necessarily mean that all of the information will be accurate from an objective point of view or that it will have the same power to someone who hears it fourth hand as it would to someone who hears it second hand. In addition, as some types of information (in certain contexts) pass through social networks, their content is altered by peoples’ propensity to filter what they say according to standard rules of etiquette, rules that tend to slant opinions expressed by the speaker towards those thought to be held by the listener. As a consequence of this, information tends to “echo” and move towards extreme poles of trust and distrust. Although the importance of echo has been demonstrated within firms, how it might work in reference checks between firms that are currently dealing with one another is less clear and is likely, in any particular case, to be influenced by the amount of trust between the speaker and the listener, as well as the tone of their relationship. See Burt (2005, Ch. 4).

A final important aspect of network governance is that its disciplining effect can extend to all of the commitments made in a contracting relationship, not just those whose violation would give the breached-against party a credible threat to sue. It can therefore create incentives for transactors to refrain from breaching “interior promises” and from taking opportunistic actions that while not serious enough to end the relationship, nevertheless impose harm on their contracting partner. For example, suppose that a supplier refused to permit a buyer’s representative to conduct an unannounced factory inspection or audit that was authorized by the MSA. The buyer would not have a credible threat to sue for damages. It would be unlikely to be able to prove a quantifiable harm from the breach and a missed inspection is unlikely to be significant enough to lead it to terminate the supplier. However, the buyer could, especially if this happened on several occasions, talk to other market participants about the supplier’s behavior. This type of information might make new partners more reluctant to contract with the supplier, or make its current partners worried about its plant’s operation, leading them to exercise their rights of inspection as well. In contexts like mid-west procurement, where suppliers understand that word of this type of behavior is likely to spread quickly and impact its relationships with other buyers, suppliers will be much less likely to engage in this behavior in the first place. In sum, the existence of the network serves to increase the reputational harm and nonlegal sanctions for misbehavior. It thereby broadens the type of misbehavior that can be policed through multilateral nonlegal sanctions.

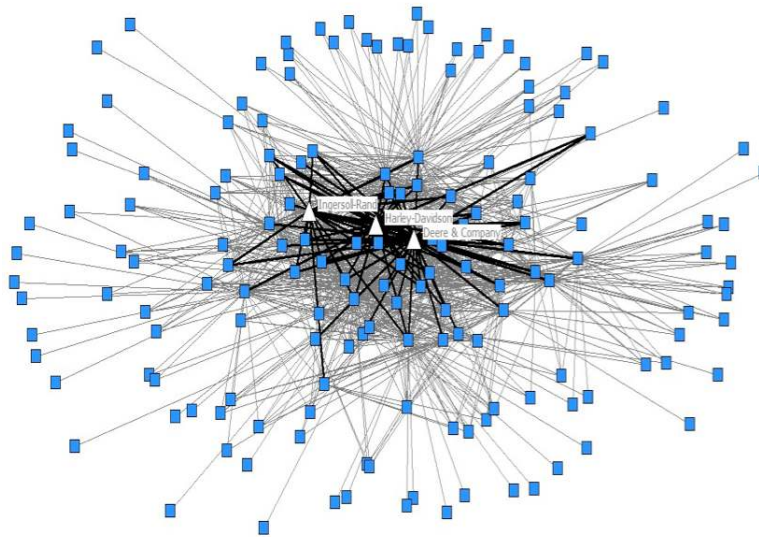
2. OEMs and Network Governance

There are no quantitative studies exploring the effects of networks on contract structure or performance in the midwest OEM procurement context. However, the interview-based study of market participants and preliminary research exploring the contractual connections among firms in the relevant market suggests that network governance is likely to play a role in OEM supplier transactions. Figure 1 below is a sociogram of the contracting relationships between three OEM’s—Harley-Davidson, Ingersoll Rand, and John Deere—and their suppliers

Network members do not need to completely trust network-circulated information for it to affect their actions. Sometimes information that is not viewed as entirely trustworthy might put the recipient firm on notice that further inquiry is needed before dealing with the firm in question. This in turn will raise the cost of dealing with the gossiped-about firm and make it a less attractive contracting partner at the early screening stage.

(black lines) and the contracting relations among their suppliers (grey lines).¹³⁹ These relationships were used as a rough proxy for interpersonal relationships. The proxy seems reasonable (if crude) in light of the fact that these contracts tend to be relationally managed. For this reason, social relationships between the firms' employees are likely to exist in all but the newest contracting relationships.

Figure 1: Sociogram of the Connections between Deere, Harley, Ingersoll and their Suppliers (dark lines) and the Relationships among their Suppliers (light lines)¹⁴⁰



The tightly connected (dense) structure of the connections between firms in this market makes it likely that reputational information about them will flow easily through the market.¹⁴¹ In addition, even if the relevant information does

¹³⁹ These figures picture the largest suppliers, since they are required to make these transactions public under the U.S. securities laws. Data was obtained from the site CSImarket.com. Ingersoll is in the middle because it is both an OEM and a supplier to other suppliers.

¹⁴⁰ The chart above is based on 165 suppliers. Preliminary results for a study looking at 6,624 suppliers to these firms found them separated by 3.64 steps, again using geodesic distance as a measure of connectedness.

¹⁴¹ In the language of social capital, this can be understood as a "closed network," a group within which connections are so dense that information will circulate quickly and reputations will form. See Burt (2005, Ch. 3).

not diffuse on its own, any firm in this network (including the OEMs) that wanted to actively find out about any other firm would only have to go through an average of 2.1 firms to get it.¹⁴²

Given this network structure, if an OEM were to act opportunistically towards a supplier, word of its misbehavior would likely spread quickly and easily through the relevant supply base.¹⁴³ This type of information, particularly if it comes from more than one source, has the potential to damage the OEM's reputation, leading to the usual repercussions. Misbehaving OEMs may be charged a higher price to reflect the perceived risk of dealing with them; their suppliers may be willing to make fewer (contractually unsecured) relationship-specific investments; they may find the supplier's B team rather than its A team assigned to their account;¹⁴⁴ and both current and future suppliers may demand additional costly protections in their formal contracts. As a consequence, the force of network governance is likely to deter OEM opportunism and give these firms an incentive to treat their suppliers fairly.

The constraints imposed on OEMs by virtue of the network are of great value to suppliers because MSAs contain few safeguards (and even fewer effective safeguards) against OEM misbehavior.¹⁴⁵ They are also valuable to OEMs be-

¹⁴² Calculated using UCINET software's measure of "geodesic distance," a measure of the average distance between any two nodes (firms) in the network.

¹⁴³ In this market, supplier employees switch firms quite often. Suppliers are therefore able to learn a great deal about the contracting behavior of both other suppliers and the OEMs by talking to their own employees. Interview with Senior Manager of OEM (Dec. 2015). OEMs are quite aware of the potential effects this movement of employees might have on their reputation. As counsel to an OEM explained, we know there is a "revolving door of salesmen at our suppliers," and they bring their knowledge of how we treat them with them as they move from firm to firm. Interview with Counsel to OEM (Dec. 2015).

¹⁴⁴ For example, a study of the relationship between automotive OEMs and their tier-one suppliers found that "[s]uppliers . . . provid[e] benefits to each OEM typically in proportion to the working relations [as measured by the study's Working Relations Index] they are experiencing. . . the better the relations experienced, the greater the benefits provided." See Planning Perspectives Inc. (2013). These benefits included having the supplier's "A team" assigned to their firm as well as the advantages that flow from "advanced technology, more supplier resources committed to their business and higher quality parts and components"). See Planning Perspectives, Inc. (2014).

¹⁴⁵ The interviews revealed that when a buyer takes advantage of a supplier, word gets out and suppliers become more reluctant to share innovations or costing information with those buyers. For example, one supplier explained that when it comes up with a cost-cutting innovation, it shares the innovation immediately with X Co., but "would never take it to [Y Co.], never . . . we know what happens there," i.e., the proprietary information will leak. NOE Respondent. And, as another supplier explained, while suppliers are very vulnerable to OEMs taking their ideas for product innovations and improvements and turning around and bidding out production, their ability to do this is tempered by the relationships the buyer's and supplier's employees have

cause they increase the credibility of their commitment to treat their suppliers fairly.

It might seem counter-intuitive that large OEMs who typically have the option of buying what they need from many sources would care so much about their reputation with their supply base. However, even firms as powerful as Apple are deeply concerned about their reputation for treating suppliers fairly. Recently, when one of Apple's suppliers filed for bankruptcy, the supplier's Chief Operating Officer filed a declaration accusing Apple of using "contracts of adhesion" and systematically mistreating its suppliers by using "bait-and-switch" tactics (Squiller Declaration at Paragraphs 18 and 10, cited in Apple (2014)). Apple responded to these accusations by seeking to put the declaration under seal. In its pleading Apple argued that "defamatory statements about the manner in which Apple treats its suppliers would make it more difficult for Apple to deal with its suppliers" (Apple 2014, Count 17, p. 56).

The existence of the network pictured above is also likely to constrain the actions of suppliers. Buyers can easily reach out to either one another or their current suppliers to learn about the reputations of putative suppliers.¹⁴⁶ In addition, large OEMs deal with a number of the same suppliers. For example, the three OEMs in Figure 1 share 13 suppliers. Deere and Harley share an additional 10. Given the relatively small number of OEMs, suppliers realize if they misbehave toward one OEM this information could quickly and easily be shared with both their other OEM buyers and, perhaps, other putative contracting partners—thereby costing it far more than the potential loss of one OEM's business.

In sum, the fact that these contracting relationships are embedded in a network of highly interconnected firms constrains the actions of both buyers and suppliers. The network helps to ensure that transactors face multilateral reputation sanctions (and the costs and loss of business that entails) when they act im-

formed, and "ultimately, you [the supplier] hope that you have the opportunity to call on those relationships to at least make sure that there's a level playing field when the purchasing decision is made. It doesn't always work that way. But for the time being, in my mind, it's the right way to do business." NOE Respondent. In addition, OEMs are aware that suppliers talk among themselves and know this information will spread quickly. Interview with Senior Supply Chain Manager at Large OEM (Apr. 15, 2014).

¹⁴⁶ Although the OEMs themselves do not have a particularly strong incentive to share information about misbehaving suppliers (outside of the standard reference checks that are conducted as part of supplier qualification programs), the procurement managers whose performance (and with it their personal compensation) depends on choosing the right suppliers have an incentive to share accurate information about supplier performance with one another.

properly, rather than merely the loss of a single business partner. By increasing the expected cost of misbehavior to both transactors, the force of network governance broadens the self-enforcing range of these contracts well beyond the range that purely bilateral forces could support.¹⁴⁷

3. Buyer-Created Local Networks: Leveraging Closure and Brokerage

Although market-based network governance is a potent force, some OEM buyers seek to strengthen their commitment to treat their suppliers well by taking steps to actively encourage the creation of strong interpersonal ties among the suppliers in their local network.¹⁴⁸ For example, in the mid-1980's, Harley-Davidson began to actively encourage the creation of a network of interpersonal ties among its suppliers. To achieve this, it developed and funded a Supplier Council, consisting of "16 suppliers which, as a group, represent a cross section

¹⁴⁷ The processes and quality control standards imposed by OEMs are reasonably similar to one another, which creates a common understanding (within limits) across the industry about what constitutes acceptable and unacceptable behavior. Although this homogeneity is not needed for network governance to be effective, its presence is likely to strengthen it.

¹⁴⁸ The now defunct Digital Equipment Corporation (DEC) is another example of a company that facilitated the creation of a network among its contracting and alliance partners that enabled it to more credibly commit not to behave opportunistically towards them. DEC, which pursued a strategy of entering into strategic alliances with many small companies, held an annual conference where all of its alliance partners could meet and learn about one another. During these meetings, DEC's partners often decided to enter into alliances with one another and used DEC managers as reference checks for capability and trustworthiness. These conferences increased business opportunities for DEC's partners and created two types of network governance benefits for DEC itself. First, as additional network connections were created among DEC's partners, the non-legal sanction each partner would suffer if they acted opportunistically toward DEC increased. If DEC retaliated by spreading negative gossip about the partner's behavior, it might destabilize the current alliances the partner had with other DEC-affiliated partners and reduce the business opportunities the partner could potentially take advantage of at the next DEC convention. Second, by promoting the growth of a network among its suppliers (both a network of actual alliance transactions and a setting in which gossip could flow among its many alliance partners) DEC bound itself to post more of its reputation as a bond against *its own misbehavior* in its relationships with its alliance partners. This, in turn, made DEC a more attractive alliance partner. By creating and strengthening these interpersonal and inter-organizational ties among its alliance partners, DEC strengthened the effectiveness of this network-aided governance structure for its many strategic alliances (Gulati 1995b). The existence of this network suggests that a DEC lawyer who was trying to determine what types of formal governance mechanisms to include in an alliance agreement who did not pay attention to the network position of the particular partner might include governance provisions that were expensive and unnecessary, or fail to include governance mechanisms that, while costly, could nonetheless add value to the deal.

Actively creating networks to bond both contractable and non-contractable aspects of deals and to increase the sanctions for misbehavior has also been accomplished through trade associations, see Bernstein (1992, 1996, 2001).

of Harley-Davidson's supply base of more than 400 OEM Suppliers . . . [that] meets 4 times a year in conferences that last 2-3 days," with each member contacting nine to twelve other first tier suppliers to get their views about the company's actions.¹⁴⁹ Although the effort was motivated by the company's desire to diffuse best practices and to create an "intimate relationship with [its] suppliers,"¹⁵⁰ it had the incidental effect creating a relatively closed network of strong ties among its key suppliers. Ties among the suppliers' employees were also created through Harley's Resident Engineer Program. This program consisted of "an on-site residency for suppliers to participate in the development of new products," in which "[f]ifty full-time resident . . . suppliers and 80 part time residents take part in new product design . . . this interaction takes place at the company's Product Development Center . . . and brings together design, engineering and manufacturing and suppliers" (see Monczka et al. 2009). In addition, engineers from important suppliers are invited to work at Harley's product development center on an as-needed basis.

By embedding its relationships with key suppliers in a closed network,¹⁵¹ Harley ensured that if it behaved badly, word of its misdeeds would quickly spread throughout its supply base.¹⁵² As a consequence, the existence of this local network made it possible for Harley to, in effect, post its reputation as a bond, enabling it to more credibly promise its suppliers that it would not behave opportunistically. The ability to make these credible commitments was particularly valuable to Harley, given that it needed its suppliers to make many Harley-specific investments and was attempting to compete with larger-volume buyers for its suppliers' loyalty and attention.¹⁵³

¹⁴⁹ See Fitzgerald (1996, 55).

¹⁵⁰ NOE Respondent. For example, one Harley supplier, when asked if he shared costing data and other information with Harley, replied that he would, explaining that "I think Harley Davidson is pretty easy to deal with, I don't have any issues, I think Harley is a good customer." NOE Respondent. And as another supplier noted, Harley was not as ruthless as the auto companies in demanding price cuts and that his firm is "in it for the long haul with Harley, who is allowing them both to make profits and they are pretty happy with them." NOE Respondent.

¹⁵¹ These examples are illustrations of the idea of network closure. See Burt (2005, Ch. 3) (providing an overview of the effects of network closure).

¹⁵² See also Holstrom & Roberts (1998, 82) (suggesting that a similar function is played by Toyota's Japanese supplier council and is one reason that Toyota organized such a council at its Kentucky plant).

¹⁵³ For an overview of Harley's Supply Strategy, see Milligan & Carbone (2000).

By creating so many personal ties and interactions among engineers from different firms, the Harley Resident Engineer Program might also, for reasons discussed more fully below, have encouraged innovation. As one engineer working on a power train project with engineers from 15 suppliers observed, “being together makes things dynamic . . . It is a huge advantage for the supplier to talk face-to-face, get in on the prototype stage” (Milligan & Carbone 2000, 63).

4. *Conclusion*

Recognizing the ways that social and business networks transmit information (both tacit and explicit), and the ways that transactors can actively create network ties to bond obligations contracts cannot, suggests that the value of a contractual relationship cannot be properly understood by looking only at the contracting parties themselves (the transactional dyad). Rather, the network structure of the relevant market in which the transaction is embedded and the local (ego) networks around each of the transactors may affect the choice of a contracting partner, the scope of the discretion given to one’s partner, the type and amount of information exchanged, the likelihood (discussed further below) that the supplier will be able to innovate on the buyer’s behalf (along with whether effective contracts for innovation can be devised) and the types of governance provisions needed. The reason is simple: the network structure of a market, the firms’ places in that structure, and the local network around each firm all affect the self-enforcing range of the parties’ contractual commitments—potentially broadening it well beyond the bilaterally generated self-enforcing range as traditionally defined—as well as the types of value-creating opportunities that the parties are likely to identify in the future.¹⁵⁴

More broadly, once it is recognized that networks have the power to credibly (though not absolutely) transmit information that is neither observable nor verifiable, and to at least partially bond obligations whose violation is not serious enough to lead to termination of an otherwise valuable contracting relationships, it becomes clear that unless lawyers pay attention to the network context of the agreements they draft,¹⁵⁵ they will not be able to properly evaluate the value of the transactions their contracts consummate, nor will they be able to structure those contracts to take advantage of the powerful social forces that can make them more effective contract governance instruments.

¹⁵⁴ Klein & Leffler (1981).

¹⁵⁵ Robinson & Stuart (2006, 244); see also *supra* text accompanying notes 126-135.

V. INNOVATION AND THE MAKE-OR-BUY DECISION

OEM buyers are increasingly interested in dealing with suppliers who can innovate either jointly or on their behalf. They prefer suppliers who are able to provide both the goods they want today and the goods (some known and some unknown) that they will want in the future. A 2014 survey of procurement executives found that “tapping supplier innovation . . . is the second-highest [procurement] priority, and includes actively attracting and developing the most innovative suppliers to help generate new ideas.”¹⁵⁶ And, a study of the most innovative firms in Europe found that “innovation leaders better understand the power of their supply base and work collaboratively to involve the right suppliers as early as possible in the innovation process,” finding that 90% of the most innovative companies (as compared to 54% of other companies) had well-developed and highly structured processes for early supplier involvement in innovation.¹⁵⁷

The importance buyers attach to the prospect of future supplier-involved innovation is also reflected in supplier qualification questionnaires that require putative suppliers to disclose their R & D expenditures.¹⁵⁸ It is also suggested by the many recent efforts of international organizations,¹⁵⁹ buyers, and private consulting firms to develop new key performance indicators to quantify suppliers’ propensity to innovate (ATKearney 2014). As one OEM executive explained, “with the partners we’ve had, that we have developed . . . we not only look at what they have today, we think [about whether] we can develop a product in the fu-

¹⁵⁶ Connaughton & Sawchuck (2014, 3) (reporting that 69% of buyer-respondents viewed attracting innovative suppliers as being of “critical” or “high” importance); see also Quinn (2000) (giving multiple examples, but not systematic data, to support the author’s view that outsourcing innovation has become profitable, widespread and in some contexts necessary for modern firms to compete).

¹⁵⁷ ATKearney (2013). The need for buyers to develop an infrastructure for outsourcing innovation suggests that there is a high fixed cost for this activity.

¹⁵⁸ See, e.g., Vossloh Fastening Systems, Supplier Questionnaire, Version 1.4 (May 2015), http://www.vossloh-fastening-systems.com/media/downloads/pdfs/sonstiges/Lieferantenselbstauskunft_V14_20150513.pdf (requiring a three-year forecast for R & D expenditures); Siemens, Questionnaire: SQ Supplier Self-Description (v2.0-20110101), https://w5.siemens.com/cms/supply-chain-management/en/supplier-at-siemens/download-center/Documents/SSD_en.pdf (“What’s your effort on R & D (in percent of Total Sales Revenue”).

¹⁵⁹ The International Standards Organization has a Working Group to design innovation management and measurement standards. See, e.g., ISO/TC 279 (“Innovation Management”) (under development) and ISO/TS 181 Nanotechnologies (“aims to provide the necessary definitions that specify the bounds of key innovation indicators as they relate to nanotechnology”).

ture together.”¹⁶⁰ And, as another put it, “if you develop the right relationship with your supply base, you can have . . . additional brains thinking about ways to improve your product.”¹⁶¹

Although a supplier’s dedication to R & D and its creation of governance frameworks for innovation are important to buyers, a buyer’s choice of supplier in a context where supplier-led innovation or joint innovation is contemplated may also be strongly influenced by various aspects of the network around the supplier—such as whether the supplier sells the part (or even parts with related technologies) mostly to firms in the buyer’s industry or to buyers in multiple industries. Interestingly, OEMs typically explore these and other aspects of the supplier’s local network in some detail during the supplier qualification process.¹⁶²

¹⁶⁰ NOE Respondent.

¹⁶¹ NOE Respondent.

¹⁶² OEMs typically require suppliers to disclose information about their local network as part of the supplier qualification process. They are asked the identity of their most significant contracting partners and any partners who might be considered competitors of the buyer, along with the amount of their output they sell to each, together with the percent of their output the proposed deal would be.

“Do you deliver to competitors of COMPANY . . . if so, please tell us. . . Please give the names of your most important COMPANYs [you deal with]. . . including percentage of your sales to them. . . [and] In your perception, what would be the mutual dependence that you perceive to be acceptable in a business relationship with COMPANY? (Expressed as percentage of sales, market position, relation to competitors, etc.”

Supplier Questionnaire from Large International OEM (name withheld on request). Knowledge of network structure is valuable to buyers for a number of reasons. First, it helps them assess the supplier’s bankruptcy risk. If a supplier sells a large portion of its output to a buyer who is known to be opportunistic or who operates in an industry where there is highly variable and unpredictable downstream demand for its product, that buyer may well have the power to bankrupt or seriously jeopardize the supplier’s business. Second, this information sometimes helps a buyer assess the cost of monitoring quality or overseeing the supplier’s production line. If, for example, the supplier is selling the good to a firm in a regulated industry where components must meet precise specifications (such as the production of an MRI machine) or to a buyer like John Deere who exercises detailed oversight of its suppliers’ production lines, the monitoring costs of buying from that supplier will be far lower than if the firm were not selling to these types of buyers. Third, network information may also impact the value of particular contract provisions. For example, some large OEMs who sole-source some parts are concerned about suppliers holding them up on price, so they include a most-favored-nation pricing provision in their contracts. This provision gives them the right to buy the goods at the lowest price the supplier charges to any other buyer. The suppliers’ local network can dramatically affect the value of this provision. If the supplier is selling the good to only four other firms who are all sole-sourced to it, the clause is of little value. On the other hand, if the supplier is selling the good to

In contexts where the buyer's goal is simply to keep up with the industry norm with respect to the quality and characteristics of the part, the buyer may prefer to purchase from a supplier who sells the part primarily to others in its industry.¹⁶³ Such a supplier is in a good position to pool the non-intellectual property-based tacit knowledge from other industry members and is likely to produce a product that conforms to the industry norm.¹⁶⁴

In contrast, a buyer who wants its suppliers to innovate on its behalf may prefer to purchase from a supplier who sells to buyers in many industries.¹⁶⁵ Such a supplier will have access to more distinct sets of both explicit and tacit knowledge; it is therefore more likely to innovate with respect to the part in question than a supplier without access to diverse sets of information.¹⁶⁶ As a leading network sociologist explained, “[p]eople with . . . early access to diverse, often contradictory, information and interpretations . . . [have] a competitive advantage in seeing and developing good ideas,” and are at “higher risk [that is,

fifty buyers, a significant number of whom multi-source the part, the most favored nations clause makes it far less likely that the supplier will be able to hold the buyer up on price. Fourth, buyers worried about technology leakage might be far more comfortable dealing with suppliers whose local networks involve buyers in other industries. Finally, as discussed further below, the structure of a supplier's local network may be of interest to the buyer because it may influence the likelihood that that the supplier will be able to innovate on behalf of the buyer in the future, see *infra* Part V. The economic value of this information is indicated by the fact that commercial companies have begun to sell it. The Bloomberg Business database now has information on all public companies and their public suppliers as well as partial information on privately held companies. Another start up, Spiderbook.com, which is currently in beta testing, also trolls the web for public information from both the SEC and the trade press and compiles information about buyer and supplier webs of commercial relationships. Similar information is also provided by SCImarket.com, though it currently contains information only about publicly traded companies.

¹⁶³ In such a situation a buyer is unlikely to be faced with the so-called “innovator's dilemma,” which arises when a buyer wants to get the benefit of the tacit knowledge a supplier obtains from other buyers but does not want the supplier to share the tacit knowledge learned from him with his other buyers (Christensen 2011).

¹⁶⁴ Such a supplier may have an advantage in that if the industry norm is rather static, it will be in a better position to move down the learning curve of production.

¹⁶⁵ Similarly, some suppliers seek a diversified buyer base so that they can learn from their customers. When a Supplier in the NOE study was asked if it was an advantage to work in “multiple end user industries,” the supplier explained that in deciding who to sell to the answer to the question “are we learning from them?” was a key criterion. See also Alcacer & Oxley (2012). Another advantage of this structure is that if a supplier “leaks” tacit or even explicit information to its other customers, it will not be to the buyer's competitors. As a consequence, buyers are more likely to share information of all types with these industry-diversified suppliers, again increasing the likelihood that they will innovate.

¹⁶⁶ See Burt (2005, 74–76), and sources cited therein.

likelihood] of having good ideas . . . [because] ways of thinking and behaving are more homogeneous within than between groups, so people connected to otherwise segregated groups are more likely to be familiar with alternative ways of thinking and behaving, which gives them the option of selecting and synthesizing alternatives.”¹⁶⁷ Indeed, the social capital literature is replete with examples demonstrating that individuals with access to more diverse sources of information are more likely to come up with new and innovative ideas than individuals who have access only or primarily to ideas from a relatively closed group that interacts primarily with its own members—like a division of a large bureaucratic firm producing a good solely for intra-firm consumption.

Interestingly, the move by firms to outsource or co-develop R&D/innovation occurred in tandem with the development of the contract governance approaches described here. These approaches, which depend for their effectiveness on the existence of relationship-specific social capital and the availability of network governance, enable buyer firms to enjoy many of the benefits of intra-firm production—such as low-powered incentives and the coordination benefits associated with hierarchy—while engaging in market transactions. This suggests that in thinking about the determination of firm boundaries in the modern economy, the decision to “buy” is much more involved than simply using an arms’ length market-mediated contract and the decision to “make” is not the only way to secure the benefits of low-powered incentives and hierarchically managed projects.¹⁶⁸ It also reveals that the network structure of the relevant industry, which

¹⁶⁷ Interview with CEO of a Cable-Industry-Related Start-up (Nov. 9, 2015). The CEO explained that he hired about 80% from outside of the cable industry, so that his employees would bring new ideas to the table. For a discussion of the ways that good and innovative ideas originate and empirical evidence that information within groups tends to be more homogeneous than information across groups and that firms with more open networks are likely to be more innovative, see Burt (2005, 63, 69, 90 & Ch. 3) (reporting the results of a study of purchasing managers which found that “better ideas [for improving the company] came from the purchasing managers, whose work brought them into contact with other companies,” and more parts of their own companies); see also Hargadon (2003) (exploring the role of networks that bridge different markets or information sets in facilitating technological innovation).

¹⁶⁸ The Tadelis and Williamson articulation of the Williamson theory of the firm assumes that in most instances innovation (bilateral adaption) can best be accomplished within the firm due to the combination of low-powered incentives and administrative fiat made available by intra-firm hierarchy, see Tadelis & Williamson (2012). However, sociological studies of the forces that drive successful innovation suggest that “when knowledge is broadly distributed and brings a competitive advantage, the locus of innovation is found in a network of interorganizational relationships,” rather than within any single organizational entity, and the benefit any given firm reaps

in turn strongly influences the types of inter-firm commitments that can be adequately bonded, may also play a key role in a firm's make-or-buy decision in a particular context.¹⁶⁹

VI. CONCLUSION

In sum, understanding the formal mechanisms and social-capital related forces that make these relational contracts work suggests that relational governance is more expensive to implement than is generally recognized.¹⁷⁰ Yet it also reveals that relational governance can create benefits for the contracting parties that go far beyond the particular transactions in which it is used.¹⁷¹ As compared

from innovation is closely tied to its position in the relevant network of firms. See Powell & Koput (1996).

¹⁶⁹ Although there are no studies testing this link, in large part because metrics rating a firm's innovativeness have not traditionally been available, these metrics are in the final stage of development by both private consulting firms and the International Standards Organization, see *supra* note 159.

¹⁷⁰ Even in the New York diamond industry – where the social capital underlying contractual relationships has an organic basis in the religious and community ties among its members – the Diamond Dealers Club, the bourse where most transactions are concluded, has adopted written rules and created costly contract adjudication and enforcement institutions to support these agreements. See Bernstein (1992). Similarly, in the cash cotton industry which was deeply embedded in the culture of the Old South, the industry created a variety of rules, information channels, and dispute resolution tribunals to support trade and make nonlegal sanctions an important and effective contract governance mechanism. See Bernstein (2001).

¹⁷¹ The arguments advanced in the text have implications for the management literature's perspective on when relational contracts should be used and how they create value in certain transactional contexts. Management scholars suggest that self-enforcing relational contracts create four types of benefits. First, they decrease contracting costs because of a reduced need for specification (and with it more effective deterrence, since all possible sources of opportunism can rarely be specified in a contract). Second, they decrease monitoring costs "because self-enforcement relies on self-monitoring rather than external or third party monitoring." Third, they reduce "the costs associated with complex adaptation, thereby allowing exchange partners to adjust the agreement 'on the fly' to respond to unforeseen market changes." And, finally, "self enforcing agreements are superior to contracts at minimizing transaction costs over the long run because they are not subject to the time limitations of contracts," which are assumed to be valid over only a specified period of time. Dyer & Singh (1998). However, as the description and analysis presented here suggests that, during the early stages of contracting relationships, trust is most likely to evolve when obligations are well specified and the tools used to determine whether goods are up to specifications are accurate and their output transparent. These measurement mechanisms are costly to create and administer. However, these costs are often overlooked because these theorists tend to focus on the benefits of relational governance, once the cost of developing the relationship-specific capital that supports it has already been borne. Furthermore, the monitoring costs involved in self-enforcing agreements are unlikely to be lower than in contracts designed to be enforced in court, because in both contexts it is a contracting party, not a third party, who must detect any breach. As for the purported "adjustments on the fly," these are routinely made

to more arm's-length types of governance, it increases the likelihood that the buyer and the supplier will exchange the type of information that may enable their employees to identify additional value-creating opportunities. It may also facilitate joint or supplier-led innovation. Moreover, by promoting the growth of relationship-specific social capital, which in turn creates trust, relational governance has the potential to broaden the range of the non-contractable commitments the parties can credibly make, particularly in contexts where network governance is a relevant force.

More broadly, looking at the ways that procurement contracts are structured suggests that the goals of industrial contracting are far broader than the goals typically associated with routine transactions for the sale of goods. When OEMs enter into agreements with their suppliers, their goal is not only to obtain contractual performance, but also to create a framework for an ongoing contracting relationship, a framework that is structured to build the types of relational and structural social capital that will enable the parties to identify and take advantage of future value-creating opportunities. As a consequence, lawyers drafting contracts cannot hope to create value-creating contractual frameworks, nor can they avoid steps that will decrease the value of these frameworks unless they understand how to harness social capital and understand their client's goals, not only for the contract they are drafting, but also for the buyer's and supplier's future contracting relationship.

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against the background of formal contracts, sometimes informally and sometimes through the filing and acceptance of a change order or a contractual modification. Finally, once it is recognized that the use of Master Agreements followed by purchase orders is the dominant mode of doing business in these markets, the claim that contracts have built-in time limitations ceases to be an important consideration. Moreover, even when contracting parties do use time-limited contracts, many aspects of these agreements are determined by the buyer's standard terms and conditions as well as the variety of handbooks and manuals, and it is routine for parties to simply enter into agreements extending former agreements, making re-contracting costs in these contexts far lower than these theorists implicitly assume. If these rather illusory benefits were the most important benefits created by relational governance, it would rarely be worth its cost given the costs of the formal and other supports it requires to function in transactions between complex organizations. Yet once it is recognized that legally enforceable contracts, no matter how well specified, cannot meaningfully govern certain types of obligations—for example the interior promises in a complex agreement, or contracts for innovation that involve many judgment calls with potential distributional impacts—it becomes clear that there are contexts where relationalism may be worth its cost, properly reckoned.

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