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Boilerplate and Economic Power in Auto-Manufacturing Contracts

Omri Ben-Shahar and James J. White

Editor's Note: This chapter examines the boilerplate contracts used by automakers to procure parts from suppliers. It identifies drafting and negotiation techniques that are used to secure advantageous terms. It also explores some prominent specific arrangements as evidence that firms with bargaining power are exploiting their position to dictate self-serving but inefficient terms. Finally, it shows how standard contractual clauses solve the problem of ex-post hold-up by suppliers.

Manufacturing contracts in the automotive industry have served a canonical role in the economic theory of contract and bargaining. The famous story of General Motors' relationship with its supplier Fisher Body in the 1920s is a landmark illustration of the problem of contractual hold-up, underlying a prominent theory of vertical integration and the nature of the firm.¹ The theoretical fascination with automotive procurement contracts is well deserved. There may be no other merchant-to-merchant contractual template that governs such fantastic economic stakes—hundreds of billions of dollars per year—and implemented through a process that involves almost no negotiation of the legal terms. Boilerplate rules these transactions.

There is a long line of law-and-economics scholarship studying the attributes of standard-form terms in contracts between sophisticated parties in high-stakes transactions. One of the benchmark predictions in this literature is that contractual terms have to be efficient if they are to be consistently used by the parties. Any rent-seeking power that a party has should be translated into a price advantage; it should not be used to dictate selfish but inefficient performance terms. Furthermore, because legal terms such as warranties and remedies affect the costs borne by the parties, we expect that sophisticated parties will be “pricing” the terms and will be ready to redraft terms that cost more than they save. A study of automobile contracts provides an opportunity to test these predictions. These are transactions in which economic power is unevenly
distributed; much dickering takes place over prices and product design; but everything else is packed into boilerplate. Every party reads the boilerplate and understands its legal effect and its economic consequences. Do strong parties dictate efficient boilerplate and extract rents through prices and other purely distributive clauses? Do they tailor their terms to maximize their net gains from the transactions?

Moreover, automotive-supply contracts are the paradigmatic long-term relationships that require a great deal of relationship-specific investments in the form of machinery, location of plants, and precontractual technology research. As the economic literature predicts, the interdependence of suppliers (who must invest in specializing for their buyers’ needs) and buyers (who need specialized parts from their suppliers) gives opportunities for hold-up. These dangers make the contracts the primary tool for deterring hold-up and encouraging investment. What are the contractual techniques used to address the risk of hold-up?

In answering these questions, we have taken a simple, almost naïve approach. We read and compared industry boilerplate contracts and talked to lawyers who drafted these forms and to some nonlawyer industry participants. We provide a case study, but it yields some general insights. For example, the boilerplate contract terms between the Original Equipment Manufacturers (OEMs) and the tier-1 suppliers show how economic power is translated into transactional advantage. From the contract terms, we can identify ways the OEMs extract value from their suppliers. Contrary to the fabled GM–Fisher Body story, we find no real problem of hold-up by suppliers. The claim that suppliers with a long-term contract can hold up the OEMs is based on a misunderstanding of the terms of the deal, the rules of contract law, and the structure of the market. Moreover, comparing the terms that appear in the purchase orders (POs) of the various OEMs reveals ways in which they differ and, surprisingly, it suggests that some of these terms may foster inefficiency. Finally, studying the way the form contracts are drafted gives a detailed understanding of how and when tailoring of terms takes place and how internal organizational features are harnessed to affect the outcome of negotiations over contract terms.

I. The Contracts

The automotive-supply industry is sometimes described as a pyramid built in “tiers.” At the top are the OEMs. This study focuses mostly on the “Big Three” OEMs – General Motors, Ford, and DaimlerChrysler – but it also looks at six foreign OEMs that assemble cars in the United States. Directly below the OEMs are the tier-1 suppliers – anyone who sells directly to an OEM. These companies usually sell sophisticated assemblies or parts, and most of them
specialize in designing and manufacturing automotive-specific products. They purchase their supplies from tier-2 suppliers who in turn purchase from tier-3 suppliers, and so on. Because there are only a few OEMs at the top but roughly six hundred to eight hundred tier-1 suppliers, the main issues that need to be governed by the contracts between OEMs and tier-1 suppliers are different than in lower tiers.

Supply contracts in the automotive industry are made through competitive bidding. An OEM issues requests for quotations for a particular part or assembly. The supplier whose bid is picked would ordinarily make a significant capital investment in R&D and production assets and supply this part for the duration of the car model in which the part is assembled, a period that normally lasts four to eight years. The winning bidder, however, does not always get the security of a long-term, fixed-price contract. Although some OEMs accord the supplier a long-term sourcing commitment, the actual POs are issued on a short-term basis. Shorter contracts give the parties opportunities to renegotiate aspects of the deal such as price and quantity estimates; OEMs commonly demand (and receive) price reductions every year. Technically, most of these adjustments are not modifications of the contract but, rather, renewals of short-term POs, all entered into under a master long-term agreement.

Each OEM has a single form, titled either “Global Terms” or “General Terms,” that is used almost without exception for procuring all of the manufacturing parts. General Motors, for example, enters into roughly one million procurement contracts every year, at a total amount in excess of $80 billion— all governed by a single contract form containing thirty-one paragraphs, translated into six languages.

We expected little variation in the OEMs’ forms. What we found was a different reality. There is significant variance across the OEM contracts. We examined the boilerplates of nine North American OEMs and recorded the many ways in which they differ. These differences were also confirmed in discussions with representatives of tier-1 suppliers and of the suppliers’ trade association, who emphasized that the differences in the legal terms represent in some cases significant variations in the economic consequences of the deals. According to all of our interviewees, the most important issues in the OEM boilerplate contracts are the following: termination rights, warranties and remedies, service parts, intellectual property rights in technological innovations, and tooling (the ownership of the production assets). We consider each of these issues.

**Termination.** In all purchase contracts, OEMs secure the right unilaterally to terminate the agreement. This right to terminate, which is not available to suppliers, is almost unrestricted. Either for no cause at all or for reasons
stated ambiguously as “competitiveness of price and quality,” the OEMs can, with short notice, terminate the contract. In fact, the cancellation rights are so one-sided that they might render the contracts unenforceable on the ground that they lack consideration or fail to state a quantity term under the statute of frauds. There is variation among OEMs’ forms regarding the payments to which suppliers are entitled upon termination. Whereas all OEMs provide some recovery to suppliers for their squandered investments, some, such as GM and DaimlerChrysler, are stingy – they pay only for finished parts, work in progress, and raw materials. Others are more generous: They will pay for a combination of other termination costs, such as suppliers’ obligations to their own subcontractors and investments in capital. None of the OEMs cover suppliers’ unamortized investment in R&D and engineering – a great source of agony for suppliers who expect to cover their fixed costs only after several years of supply.

It is difficult to identify the exact inefficiency that broad termination rights create, particularly because it is not clear how often these rights are exercised. Still, contracts containing harsh termination terms represent a de-facto transformation of the long-term commitment into a series of short-term agreements. In this reality, suppliers anticipate pressures from OEMs to reduce prices even after they have been awarded a contract. This creates a risk of hold-up by OEMs – “reduce your price or be terminated” – that makes relationship-specific investments less valuable.

Warranties and Remedies. Warranty provisions determine suppliers’ liability for design defects, intellectual property infringements, and the cost of precautionary recalls. There is significant variation across the contract in the sharing-of-liability clauses, which reflect true differences in the cost allocations and which correlate with different systems for monitoring of defects. It appears that OEMs with the most self-serving warranty allocation terms are also those that take longest to detect and resolve a defect. That is, they are the ones for whom the total costs of defects are, on average, greater. One of our interviewees quoted the warranty cost per vehicle to be roughly $1,000 for an American OEM that uses the harshest warranty allocation terms but only about $250 for a Japanese OEM that applies a more balanced approach. Furthermore, he pointed out that the American OEM takes, on average, 180 days from the time of the first indications of a parts defect until it is resolved; the Japanese OEM takes only forty days. Of course, Japanese cars may simply be better built than American cars. But other figures suggest that if there is a quality gap, it is not as significant as the gap in warranty costs. One way to measure intrinsic quality is the average number of problems per one hundred vehicles. Toyota and Honda,
for example, in 2003 reported 101 problems per 100 vehicles; GM, Chrysler, and Ford reported between 120 and 127 problems per 100 vehicles. This quality gap is much smaller than the warranty-cost gap, in which an American OEM suffers a cost roughly four times as high as that of the Japanese OEM.

These figures are consistent with the prediction that parties who believe that they can shift the cost of liability onto others would do less to reduce this cost. Put differently, in situations in which joint precautions by both supplier and buyer are necessary to prevent liability from mounting or in which suppliers can efficiently cure a defect, it is not surprising that the allocation of greater liability to the supplier reduces the OEM's need for a quick solution to any quality issue. What is surprising is that not all contracts are designed to induce more participation of the suppliers in the warranty process and thus fail to achieve efficiency. Compared, for example, to the boilerplate purchase contract drafted by the German Association of the Automotive Industry (VDA), which applies to all tiers, the American OEM's warranty is much harsher. The VDA contract gives the supplier a greater role in assessing any damage claim, participating in repairs and replacements, and limits the scope and duration of warranties.

**Service Parts.** Service parts are sold in the retail market at a large premium. If the OEM alone may sell these parts, the supplier is deprived of a share of potential profits. And if the supplier is obligated to supply the OEM's requirements for these parts for years after the model production ends (when it is expected that volume efficiency, materials, and skilled personnel will no longer be available), the burden on the supplier can be large.

Almost all OEMs require the supplier to agree to supply service parts for a period of ten to fifteen years after current-model production ends. Some OEMs, however, share the surplus that this production will yield. Honda and Toyota, for example, stipulate that the service-part prices will be negotiated by the parties when the time comes; that translates to a profit-sharing deal. Others (for instance, GM) require prices to remain at their low, production-phase price for an initial period, say three years, after which a higher negotiated price would be agreed on. Most harsh are terms that require suppliers to commit to fifteen years of postproduction supply and to refrain from raising prices above the production-phase prices. These provisions leave the supplier with the high cost of maintaining a production line but without the ability to recoup the expense through high sale volume.

The service-parts provisions also have efficiency implications. Maintaining the production line and the skilled labor to produce the parts will be expensive. Pricing the parts based on the cost structure prevailing when volume is much higher is a poor way to reflect the true wholesale economic price and may
lead to suboptimal purchase decisions. OEMs are reluctant to hold minor inventories of parts and instead make frequent small-volume purchases. This requires the suppliers to "turn on the machines" repeatedly to produce small, highly inefficient quantities of parts.

**Intellectual Property.** The production of assembly parts often requires the development and application of new technologies that have high value as intellectual property beyond that particular application. Much of this technology passes over to the OEMs in the course of designing the parts and assembling them into the vehicles. The contracts grant the OEMs legal rights in these valuable information assets, not only to use them in production but also to control other uses. The most extreme position, found for example in Ford's contract, accords the OEM unlimited rights to all intellectual property of the supplier that is disclosed in the course of trade, except for patents registered before the supply. Suppliers also waive their trade-secret protection and assign to the OEMs all copyrightable works created under the contract without any royalty rights. The more restrained position, as in GM's contract, limits the OEMs' right to sublicense intellectual property and protects the confidential information of the supplier.

Some suppliers refuse to grant such rights in their intellectual property. Companies whose main business is information technology (IT), such as the makers of software, are stubborn about this, and OEMs have learned to expect that they will not be able to dictate their terms to such suppliers. Indeed, some OEMs have specially drafted IT contracts that accommodate the expectations of their IT suppliers for more balanced terms.

Suppliers that have the ability to develop new technologies but who cannot enjoy the full value of the technology they develop once appropriated by the OEM will have a weaker incentive to make investments. We can only speculate that OEMs that insist on harsh IP terms end up with cars that incorporate fewer technological advances. Some of the suppliers' representatives suggested that this is the case.

**Tooling.** Representatives of tier-1 suppliers voiced many complaints against the tooling provisions. A repeated complaint was that OEMs who often pay for and own the tooling refused to allow the use of production assets to serve multiple clients. The strict ownership terms and the restriction against commingling and co-serving can lead to wasteful duplicity of investments and, of course, to inefficiency. Moreover, this strict control of the machines makes the OEMs' potential threat to terminate a contract (and haul away the production line) more credible. The fear that relationship-specific investments by the suppliers would be squandered increases.
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What can be learned from these examples of fundamental variations in the contract terms? Differences in corporate culture may explain the persistence of this variation and the lack of convergence. Furthermore, contract terms do not always reflect actual practices. The actual behavior under the contract may not vary as much as the variation in contract language. Generally, variation of terms across vendors does not itself indicate inefficiency. There may be varying efficient ways to do business. But looking at individual terms in their context, we believe that some of the boilerplate terms are inefficient. Warranty terms of some OEMs do not appear to solve a surplus maximization problem but rather to place the greatest ex-post burden on the seller. Likewise, intellectual property (IP) terms and service-parts arrangements of some OEMs do not reflect an optimal sharing of a resource that is jointly created but instead provide one-sided gains. Given the enormous stakes, we expected that economic power would be used to dictate low prices, not selfish boilerplate. But that is not what we found.

The boilerplate terms are not necessarily the cause of the inefficiency. The legal terms in the forms is the tail that is wagged by the business dog, not vice versa. It is plausible that many of these provisions are tailored to leverage the OEMs’ economic and bargaining power in the negotiation stage into advantages at the performance stage, in which the parties are locked in a classic bilateral monopoly. American OEMs’ record-breaking losses have driven them to capture any opportunity to shift costs to suppliers. But if indeed they do so in a way that reduces the overall surplus of the contracts, the shifting of costs ends up hurting the OEMs more than helping them.

What we may be witnessing is a classic agency problem: Agents find ways to save costs in the domain that they control but often neglect to consider the effect of these cost-saving measures on activities that they do not control. If the pressure on suppliers is strong enough, they will accept harsh terms and low prices. And if there are inefficient consequences, they may eventually be counted on the scorecard of a different internal division. The lawyers and purchasing officials who write and negotiate the supply contracts invest much effort in tightening up the legal terms and in leveraging the OEMs’ bargaining power in securing adherence to these terms. It is possible that this exercise of their power will degrade suppliers’ cooperation and performance in ways that become clear only later.

II. Drafting of Boilerplate

One of the striking features of automotive-supply contracts between OEMs and their tier-1 suppliers is their simplicity. Each OEM has a single form used for procuring all of the manufacturing parts. General Motors, we mentioned, enters into roughly one million procurement contracts every year with suppliers all
over the world. With few exceptions, these deals are governed by GM’s “Global Terms” – terms that are never challenged, neither at the negotiation stage (say, by battle of the forms) nor in litigation.

Another notable feature of these boilerplate forms is their durability. DaimlerChrysler, for example, is still using the form that was drafted in 1985; GM’s form goes back to 1986. Ford’s old form had been in place since the 1950s, until it was recently revised in quite dramatic fashion in 2004. Although minor revisions addressing new problems are occasionally patched onto these forms, the main terms and conditions remain unchanged over a long period of time.

These boilerplate contracts are simple. The terms are written in plain English. Although most of the tier-1 suppliers are large corporations with sophisticated legal counsel who read every word of the OEM contracts, and although each provision in these contracts can have significant effects on the division of the surplus, the clauses are drafted in a much simpler and shorter form than ordinary consumer contracts, which are usually lengthy, cumbersome, and legalistic. Perhaps this difference owes to the greater government regulation of consumer warranties; perhaps it has to do with the identity of the drafter – a buyer or seller. A seller-drafter needs to avoid the sweeping warranties of the UCC, whereas buyers like the OEMs need only to strengthen the pro-buyer UCC warranties. Note, also, that the difference between warranty terms in the auto-production context and other, consumer-related contracts cannot be explained by factors such as trade usage and course of dealing. The supplier’s warranty to the OEM is governed solely by the express warranty term.

Because boilerplate terms have to deal with many different types of situations and address many possible contingencies, drafting the standard form from scratch would seem a daunting task. It is often perceived, therefore, that the drafting of boilerplate language in mass contracts involves not much more than a cut-and-paste task, whereby the drafter identifies similar forms used by other organizations that do similar business and – on the premise that “if they work for others, they’ll also work for me” – borrows their language. Interestingly, the American OEM supply contracts were not drafted in this fashion. Each OEM contract was drafted by in-house attorneys in a concentrated effort over a short period of time with very little revision since.

No Authority to Dicker. A principal way in which OEMs prevent deviations from their own terms is by restricting the authority of agents within the organization to approve different or additional terms. Suppliers in the chain periodically try to negotiate or change the terms of the boilerplate imposed by the OEMs or other buyers. Both OEM and supplier representatives agree that changes in the boilerplate resulting from negotiations with an individual seller
are as rare as hens' teeth. Ford, for example, has erected a clever and conscious barrier to such negotiation: Only the global vice president for purchasing has the authority to change the terms on the form contract.

**Equality of Treatment.** Another factor that limits the incidence of variation from the boilerplate terms is the strong formal commitment of OEMs to treat all their suppliers equally. Of course, transactions with suppliers vary significantly with respect to the goods purchased, prices, volume, and the like. But all suppliers – from the mega corporations who produce car frames to the sellers of nuts and bolts – must take the same legal terms: payment provisions, termination rights, warranties and remedies, and so forth. OEMs believe that the fact that these terms are presented as nonnegotiable and that variations are not approved provides their suppliers with assurance that there is horizontal equity, that everyone is treated the same.

**Open-Ended Provisions**

OEMs use such open-ended provisions to address some of the issues that would otherwise be most troubling for suppliers. With respect to some of these issues, the OEM elected to implement open-ended terms, thereby postponing the dickering of the actual resolution of individual cases to the postperformance stage.

**The Dissemination of Boilerplate Terms across Tiers.** OEM contracts with their tier-1 suppliers affect the contracts entered into in lower tiers. Tier-1 suppliers, being strapped to the onerous OEM terms, turn around and offer the same terms to their own tier-2 suppliers. A striking metaphor that a tier-1 representative used is "contractual DNA." Looking at contracts down the supply chain, one can identify the OEM for which a given supply is eventually intended by the terms of the lower-tier contracts. With each tier buyer copying some of the terms it had to accept as a supplier, the OEM's terms are "genetically" replicated down the chain.

**Exception 1: Information Technology Transactions.** All of the OEMs reported that their relationships with IT providers were different from their relationships with conventional suppliers. Some OEMs have drafted different forms for IT suppliers. Ordinarily, IT suppliers insist on terms that grant them greater ownership in the intellectual property. They also successfully limit their liability and cap it at a level far below the liability that conventional suppliers may face, usually not to exceed the price paid for the component. Finally, they are reluctant to provide the same types of extensive warranties that OEMs usually demand.
It is hard to explain this exception. It may have to do with the concentration and leverage of the IT suppliers, led by Microsoft and other superpowers. But that would not explain the fact that even less powerful IT suppliers enjoy the more favorable terms. It may have to do with the importance of intellectual property clauses to IT firms because this is their only asset. Standing to lose more from the OEMs’ IP provisions, their resistance to these expropriatory clauses is therefore more credible. But that would not explain the fact that IT firms succeed not only in securing better intellectual property terms but also far more lenient warranty and remedies provisions. Or, it may simply have to do with the fact that, unlike the ordinary tier-1 assemblers, IT firms do not buy parts and therefore do not have many tier-2s to which they can turn around and dump similar antiseller terms.

**Exception II: “Backdoor” Negotiations.** Staff attorneys within the OEMs are, of course, the organ that keeps the tightest control on the boilerplate terms and guards against deviations. Other organs – specifically, engineers and purchasing agents – may have slightly divergent goals and motivations. The purchasing representatives are interested in the cost of the item and their performance is measured by their success in getting the lowest price. Engineers are interested in quality and uniqueness of features and operation and are less interested in cost. A time-honored but relatively crude way for a supplier to get better legal terms is to convince the OEM engineers that the supplier’s part is the only acceptable part and to get the engineer to write the specifications to exclude others. Or one might get the OEM engineers to agree to “engineering change orders” that modify the specification of the part, enable the supplier to quote a new price (without going through a competitive bidding process), and increase the profit on the sale of the part. These ploys that result in higher prices offset some of the cost of unfavorable boilerplate.

**III. Economic Power**

At the outset of this study, we hypothesized that OEMs’ bargaining power would be strongest at the bidding and contract formation stage and weakest once relationship-specific investments were made and performance began. We imagined that once the OEMs became dependent on a supplier, they would face instances of hold-up, in which the supplier demanded a better price and other terms. The standard hold-up account seems to fit this situation perfectly – in fact, the hold-up theory was developed in the context of the GM–Fisher Body saga, which was an OEM–tier-1 relationship. This hypothesis, we explain later, turned out to be misguided.
We also hypothesized that economic power would echo down the supply tiers, with tier-1 suppliers being dominated by OEMs but exercising their own dominance over tier-2 suppliers. This, too, turned out to be only partially true. Some powerful companies, such as Exxon and General Electric, are in the tier-2 levels and are able to wield power because of their size and product mix. Other tier-2 suppliers have power because of their wide base of clients, extending beyond the automotive industry, and can afford to pass on automotive contracts. Yet other low-tier suppliers have power that is supported by the uniqueness of their technology. Finally, the financial integrity of a firm turned out to affect its economic power in ways that are more subtle than we expected.

How far can OEMs go in drafting one-sided terms? Surely, if suppliers have choices, they can bargain away these clauses. But, for automotive suppliers who sell a large chunk of their output to OEMs, in a market in which suppliers suffer severe overcapacity, there does not appear to be much choice. Even collective efforts by the suppliers through their trade association to draft a form more favorable to sellers have not, as far as we can tell, influenced even a single term of the OEMs' contract forms.

When we move down from OEM contracts to lower tiers in the supply chain, bargaining power is no longer one-sided. Tier-1 suppliers cannot exert the same influence on tier-2s as OEMs exerted against them. For one, tier-1 suppliers do not offer the same magnitude and rarity of deals as OEMs do. If an OEM turns down a bid by a manufacturer of passenger seats, a big chunk of the business cannot be salvaged. By contrast, if the same manufacturer of seats breaks the negotiations with the supplier of leather, that supplier would have many other business opportunities.

**Switching Costs and Hold-Up.** An important factor that influences the contracts among the OEMs and suppliers was the OEMs' significant switching costs. All of the OEM representatives acknowledged that the suppliers may have some power in the course of carrying out a long-term contract. Many current contracts are for intricate subassemblies that will be installed wholesale into a finished automobile. For example, an OEM might buy the entire heating and cooling system from a supplier, and the supplier might be the principal designer of the system. Because any such system must integrate with the car's electrical and other systems and must conform to the physical location that is set aside for it in the completed automobile, the "part" may be unique. It is this uniqueness that accords the supplier the power.

If an OEM who abandons a supplier would suffer prohibitive costs in finding and qualifying a replacement, the original supplier will have some economic power over the OEM for the contracted goods or services for some
period – perhaps even to the end of the model run of the vehicle in which the part or assembly is installed. This power, we should expect, would be at its height shortly after production commences when the supplier looks forward to five years of work and the competing bidders have turned to other things. In fact, this conjecture – that a tier-1 supplier can exert hold-up power against an OEM after production begins – is widely recognized as the benchmark example in economic theory for the general problem of contractual hold-up. The standard account of the hold-up problem was developed and generically illustrated in the context of the very same OEM–tier-1 contracts that we explored. It suggests that in the 1920s, Fisher Body (a tier-1 supplier of automotive bodies) had a ten-year requirements contract with General Motors. When GM’s requirements increased due to the greater demand for closed-body cars, Fisher Body enjoyed an “intolerable” position to hold up General Motors and to refuse to make adjustments that were overall efficient and was therefore acquired and vertically integrated into GM. It is not clear how much evidence substantiates the GM–Fisher Body hold-up story, and yet it seems plausible that in light of the high switching costs, OEMs would indeed be vulnerable to rent-extraction. As one leading economist explains:

Why did GM and Fisher Body not simply write a better contract? Arguably, GM recognized that, however good a contract it wrote with Fisher Body, […] contingencies might occur that no contract could allow for. GM wanted to be sure that next time around it would be in a stronger bargaining position; in particular, it would be able to insist on extra supplies, without having to pay a great deal for them.

Our own findings suggest that, at least in the automotive business, this bargaining position–hold-up account is misguided. Even without looking into the contractual language, this account ignores the fact that each individual transaction is only part of a larger portfolio of business, both concurrently and into the future. Even for unique goods, the power of the supplier to hold up its buyer is effectively limited. If the seller uses its power to engage in explicit hold-up (for instance, “Give me an increase in price or I won’t ship”), it knows it will lose in the long run. Such threats by a seller would surely count against it in the award of new contracts. If hold-up by the supplier causes a disruption at one OEM, it is likely to become known and to be considered by other OEMs when bids are being evaluated. Thus, the short-term benefit from extracting some concession by hold-up would be more than offset by the long-term reputation sanction.

The myth that suppliers can engage in hold-up overlooks a very basic fact. Suppliers trying to hold up OEMs must threaten to halt production of a part
that is necessary to keep the assembly line working. Such a threat, if carried out, would lead to enormous losses, constituting an entire meltdown in the industry. If the OEM can show that such hold-up amounted to breach of existing obligations, the tier-1 supplier would be subjected to potentially bankrupting damages, some of which can be set off by the OEM against the supplier's account as a matter of self-help. Moreover, the OEM would likely be able to get injunctive relief, thus barring such a threat from being carried out in the first place. In other words, given that suppliers make contractual commitments prior to acquiring the hold-up power, successful hold-up must assume lethargic contractual obligation and legal enforcement, which is probably far from reality.

Moreover, in his rebuttal of the Fisher Body myth, Ronald Coase speculated that problems of supplier hold-up can be addressed by OEMs contractually. We have seen some evidence for such contractual arrangements. First, OEMs have almost unconstrained authority to terminate contracts. That is, if anyone has the contractual power to threaten to walk away, it is the OEM, not the supplier. True, they may not want to terminate a contract for supply of unique parts, but they can threaten to terminate other contracts with this same supplier, to phase out its business.

Second, OEMs maintain significant property rights in “tooling,” namely, in the machines and production assets at the suppliers' plants, and they can haul these assets away once the contract is terminated, often with only stingy compensation for suppliers' sunk investment. This ownership-of-tooling mechanism can be regarded as a subtle version of vertical integration, conforming to the Klein-Hart hypothesis of the boundaries of the firm. However, if it is an ownership solution to the hold-up problem, it is not one that rises to complete integration but rather a mechanism that accords OEMs partial ownership rights that gradually diminish over the life of the contract as the hold-up scare diminishes. The supplier is, in effect, posting a bond against hold-up; its investment will be amortized in the course of production but only if it sticks around for the long haul.

Third, OEMs reserve for themselves, in other boilerplate terms, the right to control the very profitable market for service parts for years, sometimes decades, into the future, and to potentially share this profit with suppliers. Suppliers that hold up the OEM in the short run will lose in a big way in the division of the aftermarket surplus.

Coase is correct in asserting that contractual provisions can protect OEMs from hold-up. But a more important aspect, we believe, and one that is also recognized by Coase, is that the “concern for their reputation would also have deterred the Fisher brothers from engaging in [hold up].” The explanations we heard from all the participants confirmed that it is indeed the OEMs' long
memories and the sanctions they can levy upon bad suppliers in future deals—that is, reputation sanctions—that render hold-up a bad strategy for tier-1 suppliers.

Thus, if long-term contracts confer power on the weaker seller but the seller cannot engage in hold-up, how is that power used? First, the power ameliorates the standard contract termination or cancellation terms. If the buyer cannot find a replacement, it cannot exercise its legal right to cancel. Second, particularly with a weak supplier, the contract may mitigate an OEM's setoff or hold-back of funds earned when the OEM claims that the supplier broke the contract. If the supplier is in a weak financial state, the OEM risks losing the supplier's production if it reduces the supplier's cash flow by setoff. We suspect that the seller's power is also expressed in more subtle effects on the buyer's use of its boilerplate. For example, we can imagine buyers hesitating to be as aggressive as they might be in using the boilerplate indemnity provision against an important seller. As we suggest earlier, a seller needs to be felicitous in its use of this power (for instance, “Can you give me some help with my increased material costs?”) to escape identification as a chiseler who should be avoided when new contracts are awarded. Furthermore, because many tier-1 suppliers produce a portfolio of parts, they can leverage the power they have in the supply of one crucial component to secure additional deals for other parts.

**Bankruptcy.** The picture of a weak tier-1 supplier, squeezed by powerful OEMs that demand ever-growing discounts, can change dramatically when the supplier experiences insolvency. When this happens, suppliers' threats to stop performing critical contracts become credible. They are credible because they come not from a company that is concerned with long-term business but from stern bankruptcy workout specialists who have no attachment to next year's business or even to next month's if current crises can be surmounted. In the automotive industry of today, in which suppliers' bankruptcy has become a real danger and their threat to file in Chapter 11 more credible, many suppliers who are known to be suffering losses have a more powerful negotiation position vis-à-vis their buyers.

Ironically, at times when the supplier's costs increase unexpectedly, it is that very weakness of the supplier's economic power and its inability to secure modifications to the contracts with the OEMs that can send it to bankruptcy and eventually bolster the credibility of its threat. Threats from the weak and desperate are more powerful than threats from the strong and rational. Indeed, the increasing hardship of the American automotive industry provides ample examples of this unfortunate dynamic. These examples confirm that tier-1 suppliers have no power to hold up the OEMs when the OEMs know that their
suppliers regard the costs of long-term retribution as greater than the near-term gains from improved terms. But when retribution loses its effect, hold-up can be significant. Still, suppliers generally believe that even if it is bankruptcy that drives the price renegotiation, the victorious supplier will suffer significant detriments in future dealings.

Conclusion

So there you have it – sophisticated companies use rigid boilerplate forms to govern tens of billions of dollars of sales every year. The drafters of these forms are not the least embarrassed in admitting that they draft every term in a one-sided, self-serving manner. It turns out that such unrestrained economic power in contracting is exercised not merely against the weak and ill-advised but also against sophisticated partners to relational contracts. And yet, claims of “unconscionability” do not surface in this industry. Obviously, there is no element of duress or unfair surprise in the formation of these contracts.

Our study has obvious limitations. Because our primary interest was the boilerplate contracts, the evidence we collected came from “legal” sources – the contracts, the lawyers who draft them, the lawyers representing the parties to the purchase agreements, and the very small body of case law. In the shadow of this legal cloud, there may be a different business reality in which transactions occur in a more balanced way, and OEMs exercise their power and their contractual entitlements in a selective and less selfish manner. Yet we found no evidence for such a gap.

What are the lessons that can be drawn from this study? We do not claim any general conclusions about contractual behavior, nor do we aim any critique at the law or advocate any legal reform. The automotive production business is sufficiently idiosyncratic that much of what we have learned may be applicable only to this industry. For one, it is clear that much of the bargaining power account stems from the specific structure of the industry, in which specialized tier-1 companies are “captives” – they have immense investments in production capacity and can sell only to a handful of clients. The study does identify the important role that internal organization structures play in the formation of form contracts. That is, forms are a way for principals to exert control over terms offered by their agents. But what we found here was the flip side of this account. The internal hierarchy is not the reason for the forms but rather an instrument in implementing the forms as-is, without allowing any erosion of the terms. Constantly under pressure by counterparties to vary some terms, buyers have erected artificial internal structures to prevent purchasing agents from yielding to such pressures. This internal rigidity also explains the absence
of “menus” – the refusal of the drafting party to set prices under which its counterparties can “buy” better terms.

Although some of our findings can be explained with clear economic logic, for others we did not find a compelling explanation. We do not offer a satisfactory explanation for the variance of terms across the different OEM contracts or for the conjecture that some of these terms are inefficient. If we are right in suggesting that there is inefficiency in the legal provisions, it is possible – given the enormous stakes in this industry – that a lot of money is left on the table. Clearly, the OEMs are using any means to reduce costs and are pressuring their suppliers to the maximum extent. But, by using such harsh terms, the OEMs may be creating (or, at least, not eliminating) the deadweight loss. Another finding that left us puzzled is the IT forms; these are a remarkable exception to the otherwise one-sided boilerplate in the industry. We can offer only guesses as to why IT firms succeed in securing better terms. We leave this question for future inquiry.

Finally, this study reinforces some doubts about theories of asymmetric information in contracting. We mentioned that a prominent line of thought in economic theory identifies contractual failures as the reason why firms organize the way they do and why some activities are outsourced and others are done in-house. Because auto-production contracts have served an important role in demonstrating these insights (the GM–Fisher Body story), we took a closer look at the actual contracts. We discovered a reality in which more things are “contractible” than previously suggested; where asymmetric information and imperfect verification are rarely obstacles for contracting; and where reputation sanctions quickly fill any void that the contracts may have left. And yet, the familiar economic story of vertical integration is not necessarily undermined. Although it is not manifested through outright takeover of supplier firms, we discovered that integration in production occurs in more subtle ways, such as contingent control over production assets and technological innovations.