

Transaction Cost Economics and Vertical Market Restrictions – The Evidence

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1. Introduction

Oliver Williamson's important contributions to the theory of vertical integration are well known and recognized. This recognition is due in part to the strong support that the empirical literature on the make-or-buy decision has found for his argument that asset specificity, resulting as it does in bilateral monopoly problems, is an important determinant of the propensity of firms to internalize certain transactions, i.e. to vertically integrate, or to make rather than buy.¹

What has perhaps not been discussed or recognized to the same extent is the important role that Oliver Williamson's work on transaction cost economics has played in the study of contractual clauses that restrict one or both parties to a transaction. We use Williamson's term vertical market restrictions to denote such restrictive clauses, which include but are not limited to, the vertical restraints that have been the focus of antitrust policy. In part, we suspect that such restrictions have received less attention because, in much of the empirical work on vertical integration, the buy option that is opposed to vertical integration is not fully specified. More often than not, however, purchases and sales do not take place in spot markets but are instead governed by contracts. Nevertheless, in this literature, contractual transactions are frequently not distinguished from spot-market interactions, and this leads to empirical analyses and conclusions that do not consider the use or effect of specific contract clauses. There are exceptions to this regularity, however, many of which are discussed below.

¹ See Paul Joskow in this special issue and Francine Lafontaine & Margaret E. Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. OF ECON. LIT. 629 for more on this.

There are, of course, theories other than transaction cost economics (TCE) that have been used to motivate empirical analyses of contracts and contractual restrictions. The theory of property rights is a natural candidate. However, for quite some time, that theory was considered to be simply a more mathematically grounded cousin of TCE. Thus empirical evidence related to transaction cost arguments was often interpreted as supportive of property rights theory as well. As Williamson has remarked, however, TCE traditionally has emphasized the governance of contractual relationships ex post, whereas the assumption of costless bargaining in most of the property rights literature has meant that the action occurs ex ante, at the incentive alignment stage.² Moreover, Whinston has shown how the empirical implications of transaction costs and those of property rights differ in important ways.³ This, in turn, implies that evidence should be interpreted more carefully.

Finally, for certain types of contracts, agency theory provides rather stark and clear comparative static predictions for contract clauses, implications that can be taken to data directly. Hence the empirical literature on certain types of contracts and contract restrictions found in, for example, salesforce compensation and franchising arrangements has tended to pursue implications derived from agency models.⁴

² Oliver E. Williamson, *The Theory of the Firm as Governance Structure: From Choice to Contract*, 16 JOURNAL OF ECONOMIC PERSPECTIVES, 171 (2002) at 188.

³ Michael Whinston, *On Transaction Cost Determinants of Vertical Integration*, 19 JOURNAL OF LAW, ECONOMICS, & ORGANIZATION, 1 (2003).

⁴ This is not to say that authors studying these have never cast their analyses in transaction cost terms. For example, Erin Anderson & David C. Schmittlein, *Integration of the Salesforce*, 15 RAND JOURNAL OF ECONOMICS 385 (1984) and Robert Maness, *Incomplete Contracts and the Choice Between Vertical*

It is nonetheless the case that Williamson's contributions have influenced the empirical analysis of contracts generally, and vertical market restrictions more specifically, in fundamental ways. In particular, Williamson often refers to hybrids, which he defines as forms of organization that stand between markets and hierarchies, wherein he includes both franchising and various forms of alliances, and those relationships are most often supported by contracts. In fact, from early on in his writings, contracting and specific terms or conditions embedded in contracts including vertical restraints, featured prominently.⁵

Empirically, transaction cost economics, which predicts that the choice of contract terms will be influenced by uncertainty, complexity, and specificity, has been particularly successful in explaining certain aspects of contractual agreements, such as contract duration. Indeed early empirical studies of transaction cost arguments, including the seminal work of Joskow and of Crocker and Masten in the mid to late 1980's, examined the relationship between contract duration and asset specificity.⁶ This literature showed

Integration and Franchising, 31 JOURNAL OF ECONOMIC BEHAVIOR AND ORGANIZATION 101 (1996) use transaction cost arguments to study the use of internal sales force (versus external dealers) and franchising respectively.

⁵ See notably Oliver E. Williamson, *Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach*, 127 UNIVERSITY OF PENNSYLVANIA LAW REVIEW, 953 (1979); Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519 (1983); Oliver E. Williamson, *Assessing Contract*, 1 J. L. ECON. & ORG. 177 (1985); and Oliver E. Williamson, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1985). For a more recent overview, see also Williamson, *supra* note 2.

⁶ Paul L. Joskow, *Vertical Integration and Long Term Contracts: The Case of Coal-burning Electric Generating Stations*, 1 J. L. ECON. & ORG. 33 (1985); Paul L. Joskow, *Contract Duration and Relationship*

that when more specific and valuable assets are at risk, contracts tend to be of longer duration, as predicted by the theory. Similarly, the literature on adjustment clauses in inter-firm contracts has relied extensively on TCE.⁷

Williamson states the overarching principle upon which transaction cost arguments rely as follows: “transactions, which differ in their attributes, are aligned with governance structures, which differ in their cost and competencies, in an economizing way.”⁸ Thus one of the most fundamental contributions of transaction cost economics when it comes to organization generally, and vertical restrictions in particular, is that firms’ choices of how to organize their transactions are usually based on efficiency enhancing, rather than market-power strengthening, considerations. Of course, Williamson was not the first to point towards efficiency as a motive for organizing transactions in particular ways. Coase had made this point earlier. But Williamson’s work pointed to particular aspects of transactions and organizational forms that made various choices efficient, thereby bringing new meaning to the concept of efficient organization, and most importantly, bringing the theory much closer to the data.

In this paper, we review some of the empirical work on inter-firm contracts that has been inspired by Williamson’s work on transaction costs and vertical restrictions.

Specific Investments, 77 AM. ECON. REV. 168 (1987); and Keith J. Crocker & Scott E. Masten. *Mitigating Contractual Hazards: Unilateral Options and Contract Length*, 19 RAND J. OF ECON 327 (1988).

⁷ Keith J Crocker & Scott E. Masten., *Pretia ex Machina? Prices and Process in Long term Contracts*, 34 JOURNAL OF LAW AND ECONOMICS 69 (1991) and Victor Goldberg & John Erickson, *Quantity and Price Adjustment in Long-Term Contracts: A Case Study of Petroleum Coke*, 30 JOURNAL OF LAW & ECONOMICS, 369 (1987).

⁸ Williamson, *supra* note 2, at 191.

We organize this discussion around specific restrictions that are commonly found in contracts. We conclude with some general thoughts about how what one can learn from these studies can inform antitrust concerns regarding vertical market restrictions.

2. Transaction Cost Economics and Contracting Practices

In this section, we discuss empirical studies that examine certain restrictive clauses that are found in inter-firm contracts. In our discussion, we interpret restrictions broadly to include practices, such as contract duration and adjustment clauses, that govern how a contract will evolve over time, as well as more traditional vertical restraints. In particular, contracts that do not restrict duration and methods of adjustment are more flexible. Unfortunately, they are also more vulnerable to opportunism on the part of one or both parties, and that vulnerability increases as traditional concerns of TCE, such as specificity, uncertainty, and complexity, become more important.

In our discussion, we do not attempt to be exhaustive. Instead, we have chosen to focus on a small set of restrictions and to analyze those restrictions in greater depth. Many of the studies that we discuss are concerned with the tradeoff between flexibility and freedom from opportunism that Williamson has emphasized. Some, however, test Williamson's belief that, with the possible exception of transactions that occur in concentrated markets with strong entry barriers, contract restrictions are motivated by efficiency rather than market-power considerations.⁹

⁹ Williamson, *supra* note 5.

A. Contract Duration

The period over which a contract is binding, which can be very short or can span many decades, is an important vertical market restriction. Indeed, it obligates the parties to interact for a specific period. It is therefore natural for researchers to be interested in uncovering the determinants of duration. TCE implies that contracts will be longer when firms have more specific investments at stake, since the need to protect those investments is greater. They will be shorter, in contrast, when environments are more uncertain, since flexibility assumes greater importance in that case.

In his early papers, Joskow related the duration of contracts between US electric utilities and coal companies, which can last as little as one or as long as 50 years, to various proxies that capture the amount of relationship-specific investment, and thus quasi rent, involved.¹⁰ He found that mine-mouth plants, which are plants that choose to locate next to coal mines with the expectation that they will obtain their coal from those mines – a classical case of site specificity – operate under much longer contracts than do other plants. Specifically, his baseline specification shows that mine-mouth contracts are on average 12 to 16 years longer. In addition, he finds that plants that use more coal and those that operate in the East rather than the West or Midwest use longer-term contracts. He argues that the former reflects the increased difficulty in finding alternative buyers or sellers for large quantities, whereas the latter reflects differences in the types of coal

¹⁰ Joskow, *supra* note 7 (1985 and 1987)

produced and in the production and transportation options available in the three regions. Both of those factors influence the risk of hold up. In sum, Joskow finds strong support for the hypothesis that differences in relationship-specific investments and the potential for hold up determine the duration of electric-utility/coal contracts.

Like Joskow, in their study of natural-gas sales contracts, Crocker and Masten find that firms use longer-term contracts when they face a greater likelihood of hold up, for example, because there are fewer buyers, sellers, or transportation options.¹¹ The authors consider not only the benefit of long-term contracts in protecting specific assets, but also the countervailing cost of using longer-term contracts, which they associate with the loss of flexibility in dealing with unforeseen events. Consistent with their hypothesis, they find that contract duration was reduced substantially by the 1973 oil embargo, which increased the amount of uncertainty in the market for natural gas and thus the need for flexibility.

Finally, Saussier finds similar effects in his sample of coal procurement contracts for Électricité de France.¹² Moreover, those effects persist even after endogenizing the degree of asset specificity in the transaction. All these studies are thus supportive of transaction-cost determinants of procurement-contract duration.

Moving beyond procurement, Brickley, Misra and Van Horn analyze the factors that affect the duration of business-format franchise contracts, where business format franchising involves the transfer of a way of doing business and the right to use a

¹¹ Keith J. Crocker & Scott E. Masten, *Mitigating Contractual Hazards: Unilateral Options and Contract Length*, 19 RAND J. ECON. 327 (1988).

¹² Stéphane Saussier, *Transaction Costs and Contractual Incompleteness: The Case of Électricité de France*, 42 J. ECON. BEHAV. & ORG. 189 (2000).

trademark, as is found in e.g. fast-food operations.¹³ They find that better-established franchisors rely on longer-term contracts, as do those franchisors that require greater investment levels from their franchisees and those who face higher recontracting costs. They interpret the franchisor-experience effect in terms of reduced uncertainty and explain the result regarding franchisee investment using asset-specificity arguments. Finally, when recontracting costs are higher, due to for example transaction complexity, there is greater scope for opportunism. In other words, their analysis yields results that are consistent with those obtained in the procurement literature.

Pirrong studies the contracts used in bulk shipping --- those between shippers of goods and providers of shipping transport --- and finds that they are of longer duration when markets are thin and carriers are specialized.¹⁴ He interprets these findings as evidence that increases in asset specificity lead to longer term contracts.

Finally, while not a case of contract duration per se, Lyons (2002) finds evidence that firms can support specific investments through the establishment of partnership agreements, whereby firms agree to work together in the future, or preferred supplier agreements.¹⁵ Both imply longer-term relationships. In this sense, his results resonate with Williamson's notion of contracting with safeguards, as discussed in his 1985 article: "The protective safeguards to which I refer normally take on one or more of three forms.

¹³ James A. Brickely, Sanjog Misra, & R. Lawrence Van Horne. *Contract Duration: Evidence from Franchising*, 49 JOURNAL OF LAW & ECONOMICS, 173 (2003).

¹⁴ Stephen Craig Pirrong, *Contract Practices in Bulk Shipping Markets: A Transactions Cost Explanation*, 36 JOURNAL OF LAW & ECONOMICS, 937 (1993).

¹⁵ Bruce R. Lyons, *Are Contracts Used Strategically To Frame Renegotiation? An Empirical Study of Inter-Firm Contracts*, University of East Anglia mimeo (2002).

The first is to realign incentives, which commonly involves some type of severance payment or penalty for premature termination. A second is to create and employ a specialized governance structure for referring and resolving disputes. The use of arbitration, rather than litigation in the courts, is thus characteristic [...]. A third is to introduce trading regularities which support and signal continuity intentions.”¹⁶ Partnerships and preferred supplier agreements are examples of the third possibility.

B. Flexibility, Adjustment Clauses, and Breach

As we have stressed above, it is crucial to incorporate flexibility into long-term contracts. The sort of flexibility that can be built into contracts includes, among other things, adjustment clauses for price or quantity and clauses that make breach easier. Moreover, flexibility is related to duration in the sense that shorter contracts are more flexible. Not surprisingly then, studies of the use of adjustment clauses in formal contracts have been cast mainly in terms of TCE.

Provisions for price adjustment in contracts can take many forms. Most schemes, however, can be classified as either redetermination or renegotiation mechanisms, where the former specifies a formula and the latter specifies a process.¹⁷

The choice between the two must take into account the tradeoff between flexibility,

¹⁶ Williamson, *supra* note 5, at. 186.

¹⁷ This distinction is due to Keith Crocker & Scott Masten *supra* note 7. See also Victor Goldberg, *Regulation and Administered Contracts*, 7 BELL JOURNAL OF ECONOMICS 426 (1976) for an early discussion of adjustment mechanisms in long-term contracts.

which favors renegotiation, and freedom from opportunism, which favors redetermination. As conditions are apt to change more during the life of a longer-term contract, TCE predicts that such contracts will include terms that contain more flexible adjustment clauses. Crocker and Masten assess that choice empirically in the context of natural gas contracts and find that flexible adjustment (renegotiation) is indeed more apt to be chosen in longer duration contracts.¹⁸ However, conditional on contract length, they find no evidence that increases in quasi rents or in market volatility affect the choice of adjustment mechanism.

In their study of contracts between producers and consumers of petroleum coke, Goldberg and Ericson find that over 90% of the contracts contained some form of adjustment mechanism.¹⁹ Moreover, those mechanisms ranged from price indexing based on crude-oil prices, to renegotiation when that price was above or below some limits, to negotiation at fixed periods. After 1973, however, when the volatility of the market increased markedly, indexing clauses that were meant to be in force for the duration of the contract were replaced by renegotiation clauses. These authors also found that, after 1973, the period between price changes fell substantially and termination became easier. This evidence is very supportive of transaction cost arguments.

A different, but related, question concerns just how flexible stipulated contract prices really are. To answer this question, Joskow compared realized coal contract prices

¹⁸ Keith Crocker & Scott Masten *supra* note 7.

¹⁹ Victor Goldberg & John Erickson, *supra* note 7.

to market prices.²⁰ He found that, since most coal contracts were indexed to cost factors, in periods of stable or predictable growth in demand, contract prices were relatively flexible to changing cost conditions, and thus contractual relationships did not break down. When demand turned down, however, the market price for coal was reduced and substantial deviations between market and contract prices arose. In other words, the contract prices and associated pricing rules did not track changes in market conditions well. Nevertheless, in spite of unfavorable conditions for buyers, most long-term contracts remained in effect. In some cases, parties were able to renegotiate their contracts, relying either on scheduled re-opener provisions or changed quantity commitments. But this occurred because the contract conditions permitted it. In general, the formal contract terms remained binding, that is, with clear contractual promises, litigation and breach were the exception, not the rule. One can interpret this finding as evidence that contract restrictions were chosen efficiently.

A large segment of the literature on adjustment clauses also attempts to distinguish between efficiency and market-power enhancing effects of contract flexibility. The most favored nation (MFN) clause, which guarantees buyers (sellers) the lowest (highest) price that is offered to others in a region, is perhaps the most studied. Given the antitrust authorities' stance on the anticompetitive nature of such contract

²⁰ Paul Joskow, *Price Adjustment in Long-Term Contracts: The Case of Coal*, 31 JOURNAL OF LAW AND ECONOMICS 47 (1988) and Paul Joskow, *The Performance of Long Term Contracts*, 21 RAND JOURNAL OF ECONOMICS 251 (1990).

clauses (see, e.g., Salop on the Ethyl case),²¹ it is not surprising that most authors have modeled the use of MFN clauses as practices that facilitate oligopolistic coordination. In particular, those clauses are expected to eliminate the possibility of selective price discounts and thus enhance cartel stability. Crocker and Lyon, however, argue that MFN provisions facilitate efficient price adjustment in long--term contracts.²² In contrast to most research in this area, which is theoretical, they use data from natural gas contracts to distinguish empirically between competing explanations. After noting that market power and thus collusion opportunities reside with the buyers in this market, Crocker and Lyon claim that the evidence in favor of efficiency rather than collusion is twofold. First, they find that the use of MFN becomes much more likely as the number of buyers increases, which they argue is inconsistent with the notion that MFN clauses facilitate buyer collusion. Second, they show that the nondiscrimination regions over which MFN clauses are defined are small and correspond more closely to sellers' alternative market opportunities than to buyers'. Yet to be effective as practices that facilitate buyer collusion, MFN clauses would need to be applied to the set of competitors that buyers rather than sellers face. In addition, they note that MFN adoption patterns parallel those of clauses indexing gas prices to those of other fuels, evidence they argue further supports their efficiency argument.

²¹ See Steven Salop, *Practices that (Credibly) Facilitate Oligopoly Coordination*, in NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE (Joseph E. Stiglitz & G. Frank Mathewson eds. 1986).

²² Keith J. Crocker & Thomas P. Lyon, *What do "Facilitating Practices" Facilitate? An Empirical Investigation of Most-Favored- Nation Clauses in Natural Gas Contracts*, 37 JOURNAL OF LAW AND ECONOMICS, 297 (1994).

The effect of take-or-pay provisions, which obligate buyers to pay for a contractually specified minimum quantity, called a take percentage, even when delivery is not taken, has also been studied. With those provisions, flexibility increases as take percentages fall, but protection of specific investments also declines, creating a tension between these two goals. Various explanations for the existence of take-or pay provisions (e.g., risk sharing) have been proposed. Relying on transaction-cost arguments, Masten and Crocker suggest instead that they provide an efficient means for contract breach.²³ They test this hypothesis in natural-gas markets. Specifically, they explain take percentages as functions of buyer and seller numbers and find that take percentages fall (flexibility increases) when sellers are few and buyers are many. These results are consistent with an efficiency rationale, since both factors raise the alternative value of gas reserves and make breach more desirable.

Finally, Mulherin, who also argues that take-or-pay and MFN clauses are efficiency rather than market-power enhancing in natural-gas markets, provides empirical evidence consistent with the idea that the use of those clauses is related to bilateral contracting hazards, as suggested by TCE.²⁴

²³ Scott E. Masten & Keith J. Crocker, *Efficient Adaptation in Long-Term Contracts: Take-or-Pay Provisions for Natural Gas*, 75 *AMERICAN ECONOMIC REVIEW* 1083 (1985).

²⁴ Harold J. Mulherin, *Complexity in Long-Term Contracts: An Analysis of Natural Gas Contractual Provisions*, 2 *JOURNAL OF LAW, ECONOMICS, & ORGANIZATION* 105 (1986).

C. Vertical Restraints

The evidence above suggests that many aspects of contracts can be explained using transaction cost arguments, and thus that there can be reasonable efficiency rationales for many contractual terms. In particular, that evidence – combined with numerous studies where authors show that the choice of vertical integration can also be explained by efficiency motives – suggests that vertical arrangements in procurement and distribution are not adopted for market power, reasons. However, we have looked mainly at restrictive clauses that have not been the primary focus of antitrust policy. We now turn to restrictions that have been viewed less favorably, restrictions that are known as vertical restraints (VR), to see if our assessment changes.

Williamson claims that, with a few exceptions involving tight oligopolies or dominant firms, vertical restraints are adopted to enhance efficiency.²⁵ Our analysis of the empirical literature on vertical restraints below confirms this claim.

Many empirical analyses of vertical restraints examine their effects on various outcomes, such as prices or profits, as a way of assessing whether they serve anti-competitive or efficiency objectives. In addition, some studies attempt to determine why and when they are used by analyzing where they occur most. We begin with a discussion of some of the motives for employing VR, which is followed by a few examples of the use and consequences of the use of specific restraints.

²⁵ Williamson, *supra* note 5, at 953.

Vertical restraints most often arise in retail settings, with the upstream firm or manufacturer typically restricting its downstream firm or retailers' choices.²⁶ We discuss why a manufacturer might want to do this from both efficiency and market power points of view.

Many of the efficiency enhancing motives for using VR are based on the idea of aligning incentives between manufacturer and retailer. Indeed, when those two links in the vertical chain are independent firms, each has its own objectives, and those objectives can diverge. In particular, retailers might want to pursue what Williamson calls subgoals, where subgoal pursuit refers to efforts to promote local or private goals at the possible expense of global or system objectives.²⁷ Fortunately, this problem can often be overcome or lessened through the use of vertical restraints.

One important efficiency motive, retailer free riding, is a classic case of subgoal pursuit. Specifically, manufacturers who invest in improving retail outlets, promoting retail products, or training outlet managers might worry that retailers who also sell competitors' brands will free ride on those investments. For example, investment in retail facilities enhances sales of not only own brands but also of the brands of rivals. Manufacturers might therefore worry that, for example, retailers will encourage customers to switch to a rival brand that has a lower price --- thereby making the sale easier --- or that has a higher retail margin --- thereby making the sale privately more profitable. Exclusive dealing resolves this problem by making it impossible for the retailer to propose an alternative brand to customers. In this context, exclusive dealing is

²⁶ We use the term manufacturer broadly to include franchisors, who do not 'manufacture' products.

²⁷ Williamson, *supra* note 5, at 955.

a mechanism that enables upstream firms to protect their investments against potential retailer opportunism. Furthermore, in its absence, potentially profitable investments might not be undertaken.

Alternatively, dealer services at the point of sale can enhance the demand for a manufacturer's product. However, the goodwill that is generated by good service at one outlet can cause some customers to purchase the product from a rival retailer. The manufacturer captures this externality but the retailer does not. The retailer might therefore provide a level of service that is suboptimal from the manufacturer's point of view. Furthermore, the problem worsens as the fraction of repeat business that retailers face falls. For example, outlets that are located near motorway exits have less incentive to provide services.

More generally, not only do retailers have incentives to free ride on the value of a brand and put in too little effort, a vertical externality, they also have incentives to free ride on services offered by other retailers of the same brand (e.g., product promotion), a horizontal externality. If service is important to the sale of manufacturers' products, they will need to ensure that retailers provide it. Klein and Murphy propose that manufacturers can use vertical restraints such as minimum resale prices to ensure that their retailers earn above normal returns, which means that those retailers have something to lose if their contracts are terminated.²⁸ Those returns, in combination with ongoing quality or service monitoring and the threat of termination, entice retailers to provide the desired level of quality or service. Since the quality and service levels in question are

²⁸ Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 JOURNAL OF LAW & ECONOMICS 265 (1988).

valued by customers -- if it were otherwise manufacturers would not value them -- quantities sold and consumer satisfaction should be enhanced.

Vertical restraints, however, are often viewed with suspicion because comparable horizontal practices are frowned upon. For example, resale price maintenance is vertical price fixing, exclusive territories can create monopoly power, and exclusive dealing can inhibit entry. Nevertheless, as we have just seen, real efficiencies can be associated with those restraints. Those efficiencies must therefore be evaluated in light of the potential for competitive harm. Competition authorities often focus on two anticompetitive motives for adopting VR -- collusion and exclusion.

It is often claimed that vertical restraints can strengthen retail cartels (e.g., minimum RPM can enforce a higher retail price). However, we have little to say about this since it does not explain why manufacturers would want a high retail price.

Vertical restraints can also facilitate manufacturer cartels. For example, uniform RPM (i.e., setting retail prices that are the same for all retailers) combined with uniform wholesale prices can enhance cartel stability. In particular, it makes it more difficult for manufacturers to grant selective price cuts to retailers, a practice that is associated with cartel breakdown. Furthermore, rival manufacturers can interpret retail price changes as reflecting manufacturer rather than retailer intent.²⁹

The main worry of antitrust authorities when it comes to vertical restraints, however, is the possibility that their use will foreclose entry by competitors at some level of the vertical chain. For example, a manufacturer that establishes a retail network that is governed by exclusive dealing and that involves most retailers might prevent competitors

²⁹ Williamson, *supra* note 5, at 968.

from gaining access to customers at a reasonable cost, if at all. This in turn could prevent entry of rival manufacturers and perhaps even lead rivals to exit.³⁰ This argument, however, requires that entry into retailing be costly due to, for example, economies of scale or a scarcity of good locations. Exclusive dealing, which has sometimes been referred to as vertical integration by contract, is the form of restraint for which foreclosure arguments are most frequently made.

In the end, if vertical restraints are used to lessen competition at some level of the vertical structure through foreclosing or disadvantaging rivals, prices to consumers should be higher, quantities sold smaller, and consumer choice more limited than they would be in the absence of such restraints. Williamson claims that this is unlikely unless certain structural conditions exist in the industry (e.g., tight oligopolies or dominant firms).³¹ Otherwise we should look for the efficiencies that motivate the parties to a contract.

From a policy point of view, it is important to determine which motives prevail. In other words, are VR adopted mainly for efficiency reasons, as Williamson claims, or is

³⁰ See, e.g., Thomas Krattenmaker & Steven Salop *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE LAW JOURNAL 209 (1986); Philip Aghion & Patrick Bolton, *Contracts as Barriers to Entry*, 77 AMERICAN ECONOMIC REVIEW 388 (1987); William Comanor & Patrick Rey *Vertical Restraints and the Market Power of Large Distributors*, 17 REVIEW OF INDUSTRIAL ORGANIZATION 135 (2000).

³¹ Williamson, *supra* note 5, at 993.

their use more sinister, as has historically been claimed by those who enforce competition policy?³² An examination of specific restraints can shed light on this problem.

Exclusive dealing occurs where a manufacturer requires that a retailer sell only her products. This is perhaps the most common form of VR. Indeed, all franchising involves some form of exclusive-dealing arrangement. Moreover, one finds exclusive dealing in many other contexts, including, for example, the GM - Fisher Body contract,³³ the contracts between boat captains and tuna processors studied by Gallick,³⁴ and the contracts that manufacturers rely upon with their distributors. In particular, Heide et al found that 46 of the 147 manufacturers they surveyed - all of them from the industrial machinery and equipment or the electronic and electric equipment sectors - used exclusive dealing clauses in their contracts with distributors.³⁵

Exclusive territories are another important form of vertical restraint. With this restraint, a manufacturer assures a downstream firm that it will be the exclusive reseller of a brand in a geographic market. As noted by Marvel, exclusive territories often accompany exclusive dealing clauses.³⁶ Not surprisingly then, they are commonly

³² Competition authorities' attitudes towards VR often change, both over time and across jurisdictions (see, e.g., Francine Lafontaine and Margret E. Slade, *Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy*, HANDBOOK OF ANTITRUST ECONOMICS (Paolo Buccirossi ed., 2008).

³³ Benjamin Klein, Robert G. Crawford, & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Practice* 21 JOURNAL OF LAW & ECONOMICS, 297 (1978).

³⁴ Edward C. Gallick, *Exclusive Dealing and Vertical Integration: The Effects of Contracts in the Tuna Industry*, Federal Trade Commission Bureau of Economics Staff Report, Washington, D.C.

³⁵ Jan B. Heide, Shantanu Dutta, & Mark E. Bergen, *Exclusive Dealing and Business Efficiency: Evidence from Industry Practice*, 41 JOURNAL OF LAW & ECONOMICS 41 (1998).

³⁶ Howard Marvel, *Exclusive Dealing*, 25 JOURNAL OF LAW & ECONOMICS 1 (1982).

granted to industrial sales forces and wholesale distributors. It is also customary for cleaning-service franchises, for example, to grant exclusive territories. More generally, 3 out of 4 franchised chains grant some form of exclusive territory to their franchisees (Blair & Lafontaine).³⁷ Furthermore, in their studies of manufacturing firms in the industrial machinery and equipment and the electronic and electric equipment sectors, Dutta et al. found that 69 of the 147 firms in their final sample used territorial restrictions.³⁸

Tying refers to situations in which a manufacturer requires its customers to purchase product B as a condition for obtaining what they really want, namely product A. Well known examples include IBM, which required that purchasers of computers also buy punch cards, and movie distributors who practiced block booking in the early days of the industry. Block booking is a form of bundling that requires that exhibition houses rent packages of, rather than individual, films. Perhaps the most famous tying case, however, involved Microsoft's attempt to tie the use of Internet Explorer to its Windows operation system.³⁹

Resale price maintenance (RPM), involves an upstream firm that exerts control over the price that the downstream firm can charge. RPM takes many forms including setting a specific price or a price floor or ceiling. Due to the fact that RPM is or has been illegal in most countries, examples often come from antitrust challenges, which have

³⁷ Roger D. Blair & Francine Lafontaine, *THE ECONOMICS OF FRANCHISING* Chapter 8 (2005).

³⁸ Shantanu Dutta, Jan B. Heide & Mark E. Bergen, *Vertical Territorial Restrictions and Public Policy*, 63 *JOURNAL OF MARKETING* 121 (1999).

³⁹ See Michael Whinston *Exclusivity and Tying in US v Microsoft: What We Know and Don't Know*, 15 *JOURNAL OF ECONOMIC PERSPECTIVES* 63 (2001).

included cases involving firms in sectors such as gasoline distribution, recreational equipment, and brewing and distilling. Moreover, franchisors have been known to exert downward pressure on the prices charged by their franchisees (i.e. maximum RPM),⁴⁰ while in other contexts manufacturers, including high-end electronics and fashion firms, have successfully implemented minimum pricing requirements.

Incidence of vertical restraints or where they occur

Ippolito examines the population of all 203 reported cases of resale price maintenance in the US between 1975 and 1982, a period during which a fairly broad interpretation of what constitutes RPM was adopted by the courts, and during which she argues the courts adhered quite strictly to the per se standard.⁴¹ She shows first that vertical restraints are often used together. Firms simultaneously relied on other vertical restraints in 122 of the RPM cases, most frequently territorial, tying, or customer restrictions (49, 31 and 32 of the cases respectively). Cases of RPM also often involved other charges, in particular horizontal price fixing in 30, and refusal to deal in 40 of the cases. In addition, she finds evidence that a non-trivial portion of RPM cases, namely 65% of all private, and 68% of all public cases in her data, arise in contexts where products can be classified as complex, new, or infrequently purchased, which are the types of products where the special services theory for RPM is most likely to hold. She also finds another largely overlapping segment of cases arising in contexts where dealers

⁴⁰ See Blair & Lafontaine, *supra* note 37.

⁴¹ Pauline M. Ippolito, *Resale Price Maintenance: Empirical Evidence from Litigation*, 34 JOURNAL OF LAW & ECONOMICS, 263 (1991).

can influence the quality of the final good or the customer's experience in important ways. Here again, manufacturer controlled pricing can alleviate the fundamental incentive alignment problem that efficiency motives and TCE emphasize. Yet another set of (mostly franchising) cases seems well explained by concerns over vertical sales-effort externalities. She concludes that collusion is not the primary explanation for the RPM practices that were prosecuted during this period.

Heide et al., for their part, focus on exclusive dealing, which historically has not been treated as harshly as RPM by the antitrust authorities.⁴² As a result, they were able to obtain survey data that they use to examine what leads manufacturers to adopt exclusive dealing in their contracts with distributors. They found that manufacturers who were more concerned that their promotional efforts, training, or general support of distributors might benefit their competitors were much more likely to adopt exclusive dealing arrangements. On the other hand, when it was difficult for manufacturers to assess whether their dealers sold other manufacturers' products or when manufacturers perceived that their customers had a preference for multi-product distribution, they were less likely to rely on exclusive dealing. Again, these results are consistent with efficiency arguments for employing the restraints, in particular, with the need to curb subgoal pursuit by the individual parties as emphasized by Williamson.

Finally, Zanarone compares contracts used by nineteen car manufacturers with their dealers in Italy before and after the 2002 European Commission prohibition of the

⁴² Heide, Dutta & Bergen, *supra* note 38.

use of location clauses in car distribution.⁴³ Those clauses prevented dealers from selling cars outside of their manufacturer-assigned territories. Zanarone shows that once exclusive territories became illegal, the number of car manufacturers who required dealers to abide by a variety of explicit standards and required dealers to contribute to an advertising fund that the manufacturer controlled went up significantly. In other words, a new set of restraints was substituted for those that were prohibited. Given that the new restraints could have been chosen prior to the change in the law, from the manufacturer's point of view, they are almost certainly less efficient. Zanarone interprets the post 2002 changes as evidence that exclusive territories were used to induce desired service and advertising levels.

Effects of vertical restraints or what they do

Table 1 summarizes results for studies that have examined vertical restraints.⁴⁴ All entries in the table involve restraints that manufacturers chose to impose on their

⁴³ Giorgio Zanarone, *Vertical Restraints and the Law: Evidence from Automobile Manufacturing*, 52 JOURNAL OF LAW & ECONOMICS 691 (2009).

⁴⁴ References for the studies in the table are: Margaret E. Slade, *Regulating Manufacturers and their and their Exclusive Retailers*, FOUNDATIONS OF COMPETITION POLICY (Morten Berg & Einar Hope eds. 2000); John Asker, *Measuring Cost Advantages from Exclusive Dealing: An Empirical Investigation of Beer Distribution*, NYU Stern mimeo (2004); Tim R. Sass, *The Competitive Effects of Exclusive Dealing: An Empirical Investigation of the Malt Beverage Industry*, 23 INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION 203 (2005); W. J. Jordan & B.L. Jaffee, *The Use of Exclusive Territories in the Distribution of Beer: Theoretical and Empirical Observations*, 32 ANTITRUST BULLETIN 137 (1987); Tim R. Sass & David S. Saurman, *Mandated Exclusive Territories and Economic Efficiency*, 43 JOURNAL OF LAW & ECONOMICS 395 (2000); Tim R. Sass & David S. Saurman, *Efficiency Aspects of Exclusive*

distributors, as opposed to vertical restraints that local or state jurisdictions imposed from outside of the vertical chain.⁴⁵ The last three columns show the outcome variable under scrutiny in each study (variable Y in the table), the direction of the estimated effect of the restraint on that variable (effect Y), and the conclusion that is reached concerning the consequence of the restraint for consumer well-being (effect W). For example, if the variable under scrutiny is consumption, a + sign in the next-to-last column means that the use of the restraint was found to be associated with greater consumption, whereas a + sign in the last column indicates that consumers are better off as a consequence.

In performing this exercise, we look at the overall effect of the restraint. For example, if the restraint is estimated to result in higher prices and increased consumption, we indicate that it was good for consumers. In particular, if consumers purchase more despite the higher price, they must feel that other product characteristics, such as

Territories: Evidence from the Indiana Beer Market, 34 *ECONOMIC INQUIRY* 597 (1996); Pierre Azoulay & Scott Shane, *Entrepreneurs, Contracts, and the Failure of Young Firms*, 47 *MANAGEMENT SCIENCE* 337 (2001); Randy Brenkers & Frank Verboven, *Liberalizing a Distribution System; The European Car Market*, 4 *JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION* 216 (2006); Zanarone supra note 43; Andrew Hanssen, *The Block Booking of Films Reexamined*, 43 *JOURNAL OF LAW AND ECONOMICS* 395 (2000); Thomas W. Gilligan, *The Competitive Effect of Resale Price Maintenance*, 17 *THE RAND JOURNAL OF ECONOMICS* 544 (1986); Pauline M. Ippolito & Thomas R. Overstreet, *Resale Price Maintenance: An Economic Assessment of the Federal Trade Commission's Case Against the Corning Glass Works*, 39 *JOURNAL OF LAW & ECONOMICS* 285 (1996); John M. Barron, Beck A. Taylor, & John R. Umbeck, *Will Open Supply Lower Retail Gas Prices?* 22 *CONTEMPORARY ECONOMIC POLICY* 63 (2004); Stijn Ferrari & Frank Verboven, *Vertical Control of a Distribution Network – An Empirical Analysis of Magazines*, Catholic University of Leuven mimeo (2010).

⁴⁵ Jurisdictions have imposed VR in, for example, car and gasoline retailing and beer and wine distribution.

increased quality or service, more than compensate for the price change. In contrast, when only the effect on price is assessed, the findings are ambiguous. Indeed, we have discussed why higher prices can be good if they are accompanied by better service or product quality. On the other hand, higher prices can be bad if consumption falls, since it indicates that increases in service or product quality do not compensate for the price increase. For this reason, in the table we indicate that conclusions drawn from such studies are ambiguous.

Table 1
Empirical assessment of the effects of voluntarily adopted vertical restraints

Author	Year	Industry	Variable (Y)	Effect (Y)	Effect (W)
<i>Exclusive dealing</i>					
Slade	2000	Beer retailing	Price	+	Ambiguous
Asker	2004	Beer distribution	Cost	-	+
Sass	2004	Beer distribution	Price	+	+
			Consumption	+	
<i>Exclusive territories</i>					
Jordan and Jaffee	1987	Beer distribution	Price	+	Ambiguous
Sass and Saurman	1993	Beer distribution	Price	+	+
			Consumption	+	
Sass and Saurman	1996	Beer distribution	Consumption	+	+
Azoulay and Shane	2001	Several	Survival	+	+
Brenkers and Verboven	2006	Auto distribution	Price	+	Ambiguous
Zanarone	2009	Auto franchising	Other restraints	-	+
<i>Tying</i>					
Hanssen	2000	Movie distribution	Consumption	+	+
<i>RPM</i>					
Gilligan	1986	Many	Stock returns	Mixed	Ambiguous
Ippolito and Overstreet	1996	Glassware	Consumption	+	+
			Stock returns	+	
<i>Sourcing restrictions</i>					
Barron, Taylor, and Umbeck	2004	Gasoline	Price	-	+
<i>Restrictive licensing</i>					
Ferrari and Verboven	2010	Magazine distribution	Profit	+	Neutral

Notes: Y denotes the dependent variable. Effect (Y) denotes the effect on the dependent variable. Effect (W) denotes the effect on consumer wellbeing. RPM denotes resale price maintenance. Sourcing restrictions are limitations on downstream input purchases. Licensing Restrictions are restrictions on entry.

Given the small number of studies, it is difficult to make definitive claims about robust empirical regularities. This is particularly true because the studies also suffer from various econometric issues (particularly the identification problem) and because many of the findings concerning wellbeing are ambiguous. Nevertheless, the results are quite striking. In particular table 1 shows that in all cases, privately imposed vertical restraints

benefit consumers or at least do not harm them. Even the neutral effect on profits that Ferrari and Verboven find is a sign of efficiency, for, as they state "the limited profitability of restrictive licensing indicates that the rationale for this common practice should not be sought in encroachment [...] It is therefore likely that restrictive entry licensing serves another goal, such as the maintenance of minimum quality standards or other efficiency reasons."⁴⁶ To summarize, the results in the table imply that voluntarily adopted restraints are associated with lower costs, greater consumption, and better chances of firm survival.

Studies of effects of government mandated vertical restraints, in contrast, show that such restraints systematically reduce consumer wellbeing or at least do not improve it. The evidence suggests instead that when dealers or consumer groups convince the government to impose such restraints, usually to "redress" the unfair treatment that they allege to be suffering, the consequences are higher prices, higher costs, shorter hours of operation, and lower consumption as well as lower upstream profits.⁴⁷

In sum, while there are clearly limitations to the set of available studies in terms of techniques used, industry coverage, and ability to interpret the findings, the empirical evidence is consistent and convincing. Combined with evidence on where VRs are found, as described above, we conclude that the empirical literature supports Williamson's contention that "Contrary to the inhospitality tradition, contractual constraints can and often do serve legitimate economic purposes. Specifically, vertical constraints may be

⁴⁶ Ferrari & Verboven, *supra* note 44 at 24.

⁴⁷ See Lafontaine & Slade, *supra* note 32, for more on this.

needed lest subgoal pursuit by the individual parts destroy the viability of the system.”⁴⁸

The logical implication, as he suggests, is not that their use should never be questioned, but that the presumption should not be that they are detrimental to consumers. In particular, “[v]ertical market restrictions should be assumed to be efficiency-enhancing unless specific structural characteristics exist within the industry. [...] Absent the existence of a dominant firm or a tight oligopoly within an industry, vertical restrictions of all kinds, exclusive dealing included, should be assumed to promote transaction cost economies.”⁴⁹ From our perspective, the current rule-of-reason approach, combined with “safe harbors” for manufacturers with low market shares, seems more than justified based on this evidence.

3. Conclusion

Our goal in this paper has been to show how transaction cost economics, and in particular Oliver Williamson’s contributions to that body of knowledge, have informed empirical analyses of contracts and contracting practices. We eschewed the vast and supportive empirical literature on the make-or-buy decision covered elsewhere in favor of the literature on inter-firm contracts, focusing in particular on vertical market restrictions. We discuss not only the restrictions that have been studied most via transaction cost lenses, but also those that have been the focus of antitrust. The empirical literature that we summarize is highly supportive of transaction cost arguments, not because we only

⁴⁸ Williamson, *supra* note 5, at. 992.

⁴⁹ Williamson, *supra* note 5, at. 993.

selected supportive studies but because support is pervasive. Perhaps more important, the empirical literature reveals that efficiency enhancing rather than market-power strengthening motives explain most of the restrictive clauses found in inter-firm contracts. As Williamson remarked, not only was a market power argument for the use of various contracting practices too easy, “since any inventive economist could always discover some monopoly purpose, however remote or insubstantial, lurking somewhere, but it discouraged efforts to investigate whether the business practice in question had other origins (as well or instead).”⁵⁰

Nevertheless, one should view much of the evidence with caution. Indeed, some of the studies were published several decades ago, and some of them do not satisfy the econometric standards that tend to prevail today. Having said this, taken together the studies point in the one direction -- the direction of efficiency.

As we have discussed elsewhere, there is also strong support in the empirical literature for the idea that property rights and agency considerations matter.⁵¹ However, as Williamson put it “[t]o ownership and incentive alignment, therefore, transaction cost economics adds the proposition that the ex post support institutions of contracts matter.” This is also clearly reinforced by the data.

A recurring theme in Williamson’s writings is that governance modes and contracts are discrete alternatives among which contracting parties choose. None is perfect for the task, but each will be a better match in some circumstances. The role that Oliver Williamson has played in reorienting the literature towards alternative, efficiency-

⁵⁰ Oliver E. Williamson THE ECONOMIC INSTITUTIONS OF CAPITALISM 178 (1985).

⁵¹ Francine Lafontaine & Margaret E. Slade (2009) supra note 1.

based, explanations cannot be overstated. “The application of the lens of contract/private ordering/governance leads naturally into the reconceptualization of the firm not as a production function in the science of choice tradition, but instead as a governance structure. [...] Pluralism has much to recommend it in an area like economic organization that is beset with bewildering complexity. Such pluralism notwithstanding, the governance approach has been a productive and liberating way by which to examine economic organization. [...] It has been liberating in that it has breathed life into the science of contract and, in the process, has served to stimulate other work -- part rival, part complementary.”⁵²

While we find the evidence compelling, it is clearly not sufficient. Indeed, the paucity of empirical studies can be contrasted with the abundance of theoretical articles that have been written on the effects of vertical restraints in particular and vertical market restrictions more generally. Nevertheless, as we have stressed elsewhere,⁵³ we endorse the idea that, faced with a vertical market restriction, the burden of evidence should be placed on competition authorities to demonstrate that the arrangement is harmful. Moreover, there should be safe havens, based on for example market shares, that allow firms in workably competitive industries to feel safe from prosecution when they adopt restrictive clauses in their contracts.

⁵² Williamson, 1992, at 191- 192

⁵³ Lafontaine & Slade supra note 2.