

VERTICAL AGREEMENTS: MOTIVATION AND IMPACT

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After an introduction to Chicago School antitrust analysis, this chapter provides an overview of the main insights that economic theory has provided in regard to vertical agreements. Following a theoretical discussion of both the benign and anticompetitive motivations for vertical coordination and a survey of the empirical literature, the article concludes that while a general per se prohibition on price restraints is unlikely to be appropriate, there is reason to have a policy that is more restrictive on price restraints than nonprice restraints.

1. Introduction

Many relationships between suppliers of goods and their distributors (e.g., wholesalers and retailers) go well beyond simple agreements to deliver goods at a certain unit price. Often, these relationships are governed by medium- or long-term contracts that impose certain obligations on one or both parties, restricting in some way their commercial freedom. For example, a supplier who grants an exclusive sales territory to a distributor necessarily commits not to sell to other distributors based in that specific area. Similarly, distributors who want to become part of a franchise network usually have to commit not to sell the products supplied under the franchise agreement to distributors outside the network. Contractual obligations of this kind are commonly referred to as “vertical restraints.” In addition, contracts between suppliers and distributors frequently involve rather elaborate payment schemes, such as quantity discounts, fixed fees, or royalties.¹

During the twentieth century, there have been many shifts in attitude as to the permissibility of vertical restraints. Leading decisions early in the development of antitrust law reflected the somewhat orthodox view that restraints of all sorts reduce the economic freedom to act of the trading parties and thus are bound to interfere with free trade. In particular, it was thought that restraints interrupted seller access to customers

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1. In the economic literature, the mentioned payment schemes are sometimes also referred to as “vertical restraints.” As these more general payment schemes do not, by themselves, restrict the actions that the parties can take, it may be preferable to distinguish between the two. Cf. Michael L. Katz, *Vertical Contractual Relations*, in 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 655, 657 (Richard Schmalensee & Robert D. Willig eds., 1989).

and were therefore bad for competition.² In this respect, there was little difference between treatment of horizontal agreements (agreements concluded between firms operating at the same level of the production or distribution chain, i.e., competing firms) and vertical agreements. After World War II, this approach found support in a number of empirical studies that tended to show a positive relationship between dense market structures and price and profit levels in the industry.³

Since the 1960s, the Chicago School has changed the direction of the debate. First, the Chicago School stimulated a strong focus on the motivations of companies using the restraints: why do rational companies in a competitive situation consent to restrictions on their commercial behavior? The Chicago School sought to find explanations for observed economic behavior in line with the starting points of microeconomic theory (utility maximization by rational economic agents).⁴ Second, the Chicago School posited economic efficiency (welfare) as the sole normative standard that should inform antitrust law.⁵

The Chicago School emphasized that agreements concluded by companies in a vertical relationship are, by their nature, very different from horizontal agreements. The fact that the former are agreements concluded between companies that both fulfil an indispensable function in putting the product on the market suggests that they are primarily used to make the vertical combination more efficient. After all, in a vertical relationship, when one party does a poor job in satisfying consumer demand, this will not only affect the consumer but also the other trading partner. Through this special interdependent relationship, every party in a vertical agreement can, in principle, be considered a natural ally of the consumer.

William F. Baxter has presented this key observation in terms of a useful analogy: the difference between substitute products and complementary products.⁶ Whereas

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2. For the United States, see Timothy J. Brennan, *Vertical Excuses for Horizontal Practices: Should There Be a Per Se Antitrust Rule?*, 45 ANTITRUST BULLETIN 467, 468 (2000). For the European Union, see Barry E. Hawk, *System Failure: Vertical Restraints and EC Competition Law*, 32 COMMON MARKET L. REV. 973, 977 (1995), and Vincent Verouden, *Vertical Agreements and Article 81(1) EC: The Evolving Role of Economic Analysis*, 71 ANTITRUST L.J. 525, 532 (2003).
 3. This positive relationship purportedly held for horizontally concentrated as well as vertically integrated industries. DANIEL FASQUELLE, *DROIT AMÉRICAIN ET DROIT COMMUNAUTAIRE DES ENTENTES: ETUDE DE LA RÈGLE DE RAISON* 46 (1993).
 4. For a detailed account of the assumptions made by the Chicago School, see Melvin W. Reder, *Chicago Economics: Permanence and Change*, 20 J. ECON. LIT. 1 (1982), and HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* 60 (2d ed. 1999). The Chicago School had already developed as of the 1930s, but it was only since the 1960s that it began to get truly influential, in economics and beyond.
 5. See, e.g., ROBERT BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 51 (1978) (“Therefore, ‘competition,’ for purposes of antitrust analysis, must be understood as a term of art signifying any state of affairs in which . . . welfare cannot be increased by judicial decree.”) The term “efficiency” (or “economic efficiency”) generally refers to the extent to which welfare is optimized in a particular market or in the economy at large. Welfare can be conceived as the (weighted) sum of consumer surplus (the difference between consumers’ willingness to pay for consumption and the price paid) and producer surplus (profits).
 6. See William F. Baxter, *Substitutes, Complements and the Nature of the Firm*, in *THE LAW AND ECONOMICS OF COMPETITION POLICY* 27, 38 (Michael J. Trebilcock & G. Frank Mathewson eds., 1990).

horizontal agreements concern agreements concluded by companies providing competing, substitutable goods or services, vertical agreements are concluded by companies that are providing complementary goods or services.⁷

Where goods and services are *substitutes*, companies providing them are in direct competition with each other. A price cut by one will have a negative effect on the profits of other firms as the demand for their products falls. This effect is an external effect, in the sense that the price-cutting company will normally not take it into account. Each firm therefore has an interest in seeing the prices of the substitute products being increased. A joint profit-maximizing agreement between firms (e.g., a cartel) will therefore seek to internalize price externalities and lead to a joint increase in price. It goes without saying that customers are hurt by such an agreement.

When goods and services are *complements*, price cuts cause an opposite effect.⁸ Price cuts by one company will tend to stimulate demand for complementary products. This effect is again an external effect, and the price-cutting company will normally not take it into account. Thus, each firm has an interest in seeing price cuts by suppliers of complementary products. A joint profit-maximizing agreement between complementary firms will then seek to internalize the price externalities and lead to price reduction. This is exactly in the interest of the consumers. As a result, an agreement entered into by providers of complementary products is unlikely to be bad for welfare.⁹

During the 1980s and 1990s, the Chicago methodology of studying the rationale of observed behavior on the basis of rigorous microeconomic analysis and its emphasis on economic efficiency in evaluating the impact of such behavior have become the center of industrial organization.¹⁰ Its sharpest assumptions and conclusions, however, have not. This can largely be attributed to the increasing role of noncooperative game theory in industrial organization, which allows for construction of a wider range of models and a wider range of outcomes.¹¹ These models suggest that vertical integration or contractual restraints could be both rational and effective ways to engage in anticompetitive behavior.

First, whereas the Chicago School tended to view the main aspects of market structure—in particular, the presence or absence of actual and potential competitors—as

7. Such complementarity is most apparent in the interdependence between production and distribution: when a producer produces a good, the only way the product can reach the market is through some form of distribution. Likewise, each distributor is dependent on the supply of products by producers.

8. The pricing incentives of companies producing complementary products were first analyzed by AUGUSTIN COURNOT, RECHERCHES SUR LES PRINCIPES MATHÉMATIQUES DE LA THÉORIE DES RICHESSES (1838). Cournot considered the merger of two monopolists that produce complementary goods (zinc and copper) that are used as inputs for a final good (brass). His analysis extends to the case where both input producers face oligopolistic competition.

9. The importance of the products being complements rather than substitutes can also be more formally illustrated, as Paul Seabright did in *Competition Policy Towards Vertical Restraints: Implementable Rules for Competition Authorities*, in COMPETITION POLICIES IN EUROPE 161, 175 (Stephen Martin ed., 1998). Seabright shows that each firm producing complements has a private incentive to influence the price charged by another company in a direction (downward) that improves both consumer surplus and welfare. The private and the social incentives are aligned.

10. Cf. ROGER VAN DEN BERGH, ECONOMISCHE ANALYSE VAN HET MEDEDINGINGSRECHT 61 (1997).

11. See Brennan, *supra* note 2, at 470.

given, the subsequent economic literature showed that vertical contracts could serve to durably change market structure.¹² For example, certain types of exclusive dealing¹³ contracts were shown to be effective tools for foreclosing markets, in particular by changing commitments, timing of moves, and expected payoffs in the process of competitive interaction.¹⁴

Second, also in the absence of foreclosure, the literature showed that vertical restraints may reduce competition. For instance, delegating pricing decisions to exclusive distributors may allow producers to credibly commit to less competitive behavior towards each other, making use of the fact that the incentives to compete on the distribution level differ from those on the producer level.¹⁵

As a result, most economists now believe it is impossible to predict the competitive and welfare effects of vertical restraints out of the context in which they are applied. There are circumstances in which they improve the efficiency of supplier-distributor relationships and increase competition, but there are also circumstances in which they may indeed be anticompetitive. Consequently, when it comes to vertical restraints, the move has been away from the traditional Chicago view to advocacy of a more explicit balancing test, based on the circumstances of each case. As Jean Tirole has put it, “theoretically, the only defensible position on vertical restraints seems to be the rule of reason. Most vertical restraints can increase or decrease welfare, depending on the environment. Legality or illegality per se thus seems unwarranted.”¹⁶ According to John Kay, “the best conclusion is that we should principally look at the consequences, rather than the form or first order effects of the restraints.”¹⁷

While this approach makes sense in economic theory, it has been recognized—not least by the cited authors themselves—that it would put too heavy a burden on the antitrust authorities and courts. A systematic investigation into the effects of agreements that are concluded between firms at different levels of the production or distribution chain would be totally impracticable. Guidance in the form of a relatively robust characterization of the circumstances in which vertical restraints are likely or unlikely to have detrimental effects is therefore necessary to allow for antitrust supervision that is not only effective but also efficient in keeping down enforcement costs.

The economic literature offers rather extensive material on which to base such guidance.¹⁸ The purpose of this chapter is to provide an overview of the main insights

12. See also Michael Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 838 (1990), who makes similar observations on the Chicago assessment of tying practices.

13. In this chapter, exclusive dealing contracts are defined as contracts whereby the distributor undertakes not to sell products that compete with those of its supplier.

14. See Brennan, *supra* note 2, at 470.

15. See, e.g., Patrick Rey & Joseph Stiglitz, *The Role of Exclusive Territories in Producers' Competition*, 26 RAND J. ECON. 431 (1995).

16. JEAN TIROLE, *THE THEORY OF INDUSTRIAL ORGANIZATION* 186 (1988).

17. John Kay, *Vertical Restraints in European Competition Policy*, 34 EUR. ECON. REV. 551, 560 (1990).

18. The literature on vertical restraints has largely been framed in terms of the search for vertical control within a principal-agent relationship, where the principal (the supplier) imposes contractual obligations on its agent (the distributor) when delegating responsibility for selling its products. However, in contrast with the literature on mechanism design, which seeks to characterize the outcomes that a supplier-distributor pair can achieve using general contracts, the literature on vertical restraints has

that economic theory has provided. Rather than a long enumeration of different market situations that have been studied and the corresponding results, the aim is to present and develop the main arguments, occasionally with the use of some simple examples and models. In this, we focus on the two main groups of motives for vertical restraints touched upon above: vertical coordination (Section 2) and anticompetitive motives (Sections 3 and 4, on foreclosure and softening competition, respectively).¹⁹ Section 5 provides a brief presentation of the empirical literature on vertical restraints. Concluding remarks are presented in Section 6.

2. The vertical coordination motives

The essential difference between vertical and horizontal agreements underlies most of the argument in favor of vertical agreements: vertical agreements serve to coordinate the actions of an upstream firm and a downstream firm and they may well be welfare improving in view of the complementary nature of the relationship. At the same time, it may not fully capture the complexity of most market situations. For example, what are the welfare effects of vertical restraints where more than just price is at issue (e.g., service levels, advertisement)? What if there are more players on either level? What are effective ways to coordinate when it is difficult or even impossible to write contracts that take into account every possible contingency? In this section, these variations will be discussed in turn.

At first sight, it would seem that a supplier would be keen on its distributors being as competitive as possible: all other things being equal, the smaller the distributor markup, the greater the sales and profit levels for the supplier. However, distributors incur fixed costs, many of which contain a sunk element. As a result, suppliers will normally be faced with a distribution level which has some market power (in the sense that they can set prices above marginal cost) and which is, by consequence, in a position to choose actions that are not necessarily in line with the interests of the consumers or of the supplier.

2.1. *Controlling the basic vertical externalities*

Let us, in the first instance, abstract from the interaction with other suppliers and distributors and focus on the possible coordination problems within a structure made up

traditionally taken contract obligations that are observed in practice as a starting point (exclusive distribution agreements, exclusive dealing, resale price maintenance, etc.). A good overview of general contract theory is provided by BERNARD SALANIÉ, *THE ECONOMICS OF CONTRACTS: A PRIMER* (1997).

19. The classification into vertical coordination motives and anticompetitive motives (which is, in fact, common in the literature) might suggest that the former motives are not anticompetitive. In the sense that the motives are intended to reduce inefficiencies within the vertical structure rather than to hurt rivals outside the structure this might be a proper interpretation. However, as shown in Section 2, vertical restraints taken in pursuit of vertical coordination will not always be beneficial for welfare. This may particularly be the case when vertical coordination also allows for a better exploitation of monopoly power. In those cases, the vertical restraints may just as well be deemed anticompetitive.

of one supplier and one distributor.²⁰ In its simplest setting, with demand depending only on price, we confront the classic problem of *double marginalization*.²¹ Let $D(p)$ denote market demand as a function of the retail price p . Suppose that the marginal cost of production is c and that, for simplicity, the distributor incurs no cost other than the wholesale price p_w it has to pay the supplier. Suppose further that the manufacturer supplies the distributor at a constant wholesale price and that the distributor can determine the retail price independently. Then, for a given wholesale price, the distributor will charge the retail price that maximizes its own profit $(p - p_w)D(p)$, i.e., it will charge the corresponding monopoly price $p^m(\cdot)$, which is a function of the wholesale price p_w . Likewise, to make a profit, the supplier will charge a wholesale price that exceeds its marginal cost of production: $p_w > c$. However, because of the two successive margins (both $p > p_w$ and $p_w > c$), the retail price ends up too high from the viewpoint of the structure as a whole: the retail price is $p^m(p_w)$, with p_w chosen optimally from the supplier's point of view, whereas it should optimally be $p^m(c)$, as c is the true marginal cost of the vertical structure. The pricing distortion arises from the fact that the distributor does not take into account the effect on the profit stream flowing to the supplier; nor does the supplier take into account the profit stream flowing to the distributor.

Full vertical integration, i.e., common ownership of both firms, would suffice to internalize this effect, but contractual relationships also solve the problem. Using Tirole's terminology, the target of the vertical structure is to fix the retail price at the right level.²² One way of doing so would be for the manufacturer to use resale price maintenance and fix the price at $p = p^m(c)$. A condition to use this instrument is that the retail price is observable by the supplier and verifiable, i.e., suitable to be written down in a contract. A *two-part tariff*,²³ consisting of a marginal wholesale price equal to marginal cost (c) and a lump-sum fee to capture (part of) the distributor's subsequent operating profit, is another way to avoid the pricing distortion.²⁴ The distributor is then made the residual claimant (or claimant at the margin) of the vertically integrated profit: it captures the full benefit of the vertical structure for every extra unit of product sold. In this way, the distributor faces precisely the right incentives to price optimally from the viewpoint of the vertical structure. A final way to solve the problem would be to supply at a wholesale price equal to the target price and impose *quantity forcing*. This method essentially fixes the distribution margin at the lowest possible level. All three types of vertical control lead to a lower retail price, an increase in profits for the vertical structure, and an increase in consumer surplus.

A variation of the double marginalization problem discussed above applies when promotional effort or services provided by the distributor enhance the value of the

20. The structure of the analysis provided in this subsection is along the lines of TIROLE, *supra* note 16, ch. 4.

21. Joseph J. Spengler, *Vertical Integration and Antitrust Policy*, 58 J. POL. ECON. 347 (1950).

22. TIROLE, *supra* note 16, at 173.

23. A two-part tariff is often referred to as a "nonlinear tariff" (the average price is not a constant but decreases when the volume purchased goes up).

24. The part of the distributor's operating profits that can be obtained by the supplier by using a fixed fee depends on the relative bargaining positions of the supplier and the distributor.

product to the final consumer.²⁵ In these circumstances, demand will depend on both the price level p and on s , the level of service: $D = D(p, s)$. Suppose that it costs the distributor an amount $\gamma(s)$ per unit of output to offer these services. A vertically integrated structure would choose the price-service combination (p^m, s^m) that maximizes the integrated profit $(p - c - \gamma(s))D(p, s)$. A distributor however maximizes only its own profit, $(p - p_w - \gamma(s))D(p, s)$. Whenever the supplier charges a wholesale price that exceeds the true marginal cost of production, there will be a distortion similar to the one observed in the simple example of double marginalization above: both in choosing the level of service and in the level of the retail price, the distributor will not take into account the profits flowing to the supplier. In particular, as the distributor does not reap all the benefits from increasing the level of service, it will typically choose a level that is too low from the viewpoint of the vertical structure. A supplier should therefore not opt for regular market transactions at a certain unit price but opt for some form of vertical control.

If either the service level s or the resulting expenditures $\gamma(s)$ were observable and verifiable, a contract could be written that explicitly specifies the optimal amount of service, s^m , to be provided. In combination with retail price maintenance at a price equal to p^m , the vertically integrated profit could be realized. A different, possibly less complicated way, would again be to make the distributor a residual claimant by selling him the input at marginal cost, $p_w = c$, and appropriating (part of) the distributor's operating profit through a lump-sum fee. In this way, the distributor is given precisely the right incentives to perform optimally at the margin, both in terms of pricing and in terms of service provision.²⁶ An alternative way to ensure that the distributor provides the appropriate level of services would be to write a quantity forcing contract at the optimal quantity $D(p^m, s^m)$.

The welfare effects of the possible vertical restraints in this setting are ambiguous.²⁷ On the one hand, consumers will appreciate the internalization of the double marginalization effect as this leads, all other things being equal, to a decrease in the retail price. On the other hand, the internalization of the service externality leads to an increase in the service level, all other things being equal. The resulting increase in the service costs may lead to a net increase in the retail price. Without the exact specification of the demand structure, one cannot determine the preferred situation for consumers. The underlying reason is that the exercise of market power creates a division of interest between the marginal customers (customers that are at the brink of not buying the product) and inframarginal customers (the ones that are buying the product even if the price rises a little or the level of service goes down a little). Because it searches for profit increases at the margin, the vertically integrated structure will

25. A similar argument can be built when it is the supplier who takes care of promotional effort.

26. As the distributor is made claimant at the margin, such a scheme is often characterized as a *high-powered incentive scheme*: it is the distributor who is exposed to all variations in benefits and costs at the margin. By contrast, the supplier earns a fixed fee and does not make a margin on additional sales.

27. See William S. Comanor, *Vertical Price Fixing, Market Restrictions and the New Antitrust Policy*, 98 HARV. L. REV. 983 (1985).

normally target the marginal customers. However, whereas both marginal and inframarginal customers share an interest in the provision of a given product and service at lowest cost, they are likely to have divergent preferences regarding the exact combination of price and service (this is precisely why some customers are at the margin and others are inframarginal). Consequently, it is not necessarily the case that a vertical agreement leading to an increase in service provision will enhance consumer welfare or even total welfare. The simple framework of Baxter²⁸ does not easily translate to situations with more decision variables than price.

2.2. *Controlling externalities between distributors*

In the above analysis, we saw that vertical coordination is useful when one of two parties, say, the distributor, does not reap all the benefits from its actions. It was the upstream firm in the vertical structure that was the cobeneficiary of the actions taken. When there are more companies active in the distribution of the supplier's product, another set of externalities arises, externalities between distributors.

Whenever distributors raise the price at which they sell, they confer benefits on competing distributors of the product, as more consumers will turn to these other distributors. An individual distributor will normally not take this externality into account and hence set prices lower than would be optimal for the distribution level. Whereas this is generally a good thing for the supplier and the consumers alike, some inefficiencies may result.

One possible concern is the number of distributors willing to carry the product.²⁹ When there is differentiation between distributors, for example as a result of their location or their marketing format, aggregate demand for the product will increase with the number of distributors, all other things being equal. When price competition between distributors is too strong, this may take away the incentive to set up a distribution business altogether. This is, all other things being equal, not in the interest of the supplier. The supplier might then want to use resale price maintenance in order to support the number of sales outlets. Alternatively, the supplier could use fixed subsidies (e.g., slotting allowances) to influence the number of distributors carrying its product. The exact trade-off between the number of sales outlets and the use of resale price maintenance has been studied in a number of settings,³⁰ but the theoretical support for the argument that the number of distributors ends up too low because of price competition is limited. For an argument of this type to hold, richer analytical structures appear to be necessary.

28. See *supra* Section 1.

29. See, e.g., BASIL S. YAMEY, *THE ECONOMICS OF RESALE PRICE MAINTENANCE* (1954); G. Frank Mathewson & Ralph A. Winter, *Vertical Integration by Contractual Restraints in Spatial Markets*, 56 J. BUS. 497 (1983); 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 J.L. & ECON. 285 (1996).

30. See Mathewson & Winter, *supra* note 29; George Bittlingmayer, *A Model of Vertical Restriction and Equilibrium in Retailing*, 56 J. BUS. 477 (1983); Avinash Dixit, *Vertical Integration in a Monopolistically Competitive Industry*, 1 INT'L J. INDUS. ORG. 63 (1983).

Externalities among distributors also occur in the domain of service provision and promotional effort.³¹ Product specific advertising by one distributor may well benefit other distributors of the product. The same holds when customers can obtain in-store information from one distributor and buy the product from another. To the extent that some of the benefits of service provision are enjoyed by other distributors, distributors will want to free ride on each other and provide less service themselves than would otherwise be the case. This effect is reinforced by the fact that such behavior allows for more aggressive pricing on the part of the free-riding firm as it does not incur the costs related to services provision.³²

Several options are available to the supplier to encourage an adequate provision of services and promotional effort by distributors.³³ It can choose to eliminate price competition at the distributor level by imposing resale price maintenance. Exclusive territories are another means to reduce the externality problem. More generally, in fact, any measure that reduces the intensity of price competition between distributors is a way to reduce the problem (e.g., with differentiated distributors, one could operate a selective distribution system³⁴).

While the above measures will reduce the level of free riding, they need not entirely take away the externality itself. In the case of advertising, for example, there is still a problem as not all of the benefits of advertising are reaped by the advertising company. In this case, it may be necessary to provide additional incentives to advertise, e.g., by charging a very low wholesale price, while appropriating part of the distributor's operating profit by means of a fixed upfront payment. In contrast, in the case of in-store information provision, resale price maintenance and exclusive distribution may already be sufficient as it is unlikely that customers, having obtained the presale information from one distributor, will then go to another where the price is the same or the distance great.

As for the welfare effects of the restraints that are used to internalize the service externalities between distributors, if the divergence of interest between marginal and inframarginal consumers is not too large, it is likely that the restraints are welfare enhancing, as consumers will also appreciate the resulting increase in the level of services.

31. See, e.g., Lester G. Telser, *Why Should Manufacturers Want Fair Trade?*, 3 J.L. & ECON. 86 (1960); G. Frank Mathewson & Ralph A. Winter, *An Economic Theory of Vertical Restraints*, 15 RAND J. ECON. 27 (1984); Martin K. Perry & Robert H. Porter, *Can Resale Price Maintenance and Franchise Fees Correct Sub-Optimal Levels of Retail Service*, 8 INT'L J. INDUS. ORG 115 (1990).

32. The effects are most easily seen from the case of two distributors and product advertising. Suppose market demand is given by $D(p,s)$, where s is the sum of the expenses made by the two firms for advertising ($s = s_1 + s_2$). Suppose also that consumers buy from the distributor that charges the lowest price. In that case, there is no competitive equilibrium in which one of the two firms will advertise. The only equilibrium will be one in which no advertisement is provided at all.

33. We focus on services and promotional effort that are best provided by distributors, such as in-store information provision or location-specific advertising. After all, if the supplier could equally well take care of promotional effort himself, he could simply choose to do so.

34. In a selective distribution system, the supplier operates a restricted system of distribution on the basis of "approved" distributors who agree not to supply unauthorized dealers outside the network.

2.3. *Avoiding externalities that benefit other suppliers*

The previous section highlighted the role of vertical restraints to control for externalities among distributors. By just considering one supplier and its distributors, it abstracted from concerns that the supplier may have about the externalities that are at play at the upstream level.

Important from the perspective of internal efficiency are the externalities that go with efforts on the part of the supplier to improve the distribution channel when also other suppliers make use of this channel for the distribution of (part of) their sales.³⁵ For example, when a supplier provides commercial or technical training to its distributors, this potentially makes these distributors not only more effective in selling the supplier's product but also at selling its rivals' products. The training, therefore, may also work to the rival suppliers' benefit. In addition, because these rivals do not incur the costs of training, they are in a position to charge lower wholesale prices and obtain extra market share. As a consequence of this free-rider problem, suppliers can be expected to make investments that are too low from the viewpoint of the vertical structure.

In order to eliminate this externality, the supplier may want to use exclusive dealing contracts, as a result of which the distributors cannot deal in the competitors' products. While it may be true that the supplier still does not capture all the benefits of its efforts (the distributor may still use the knowledge for other purposes), the benefits no longer accrue to its direct competitors. As such, exclusive dealing is a means of providing the supplier with a kind of property right to the fruits of his efforts.

Howard Marvel notes that the upstream externality problem is likely to arise in situations where the opinion and recommendation of the distributor carries a certain weight in the consumers' purchase decisions (otherwise, the supplier will not bother to provide training in the first place).³⁶ It is precisely in such settings that the downstream service externality discussed earlier can play a role as well.³⁷ According to Marvel, this might form an important explanation for the fact that exclusive distribution agreements and exclusive dealing agreements often go hand in hand. In the same vein, he notes that franchise agreements are often accompanied by noncompete obligations, as they involve the transfer of substantial amounts of know-how generated by the supplier.³⁸

A different efficiency motive that has been given for exclusive dealing arrangements is that they ensure that the distributors market the products "with maximum energy and enthusiasm."³⁹ If a distributor markets several products it will spend its efforts in such a way that the marginal revenue of effort will be equal across the products. A manufacturer may then choose exclusive dealing in order to elicit more distributor effort for its product. This argumentation does raise certain questions however. After all, a supplier might also choose to reduce the wholesale price in order to elicit more effort (possibly accompanied by an increase in the fixed fee). One would therefore expect the

35. See, e.g., Howard P. Marvel, *Exclusive Dealing*, 25 J.L. & ECON. 1 (1982).

36. *Id.* at 10.

37. See *supra* Section 2.2.

38. Marvel, *supra* note 35, at 10.

39. FREDERIC M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 586 (1990).

argument to hold with greater likelihood in circumstances where imposing a fixed fee on distributors raises problems of its own. One of the factors that plays a role in this respect is the aspect of allocating risk in vertical relationships.

2.4. *Vertical coordination and risk sharing*

As can be seen from the above sections, vertical restraints can be used to align incentives. One reason for the divergence of interest are the respective horizontal and vertical externalities. In the above sections, these externalities occurred in situations where the supplier and the distributors are similar in the sense that they are all profit maximizers. Another reason why there may be divergences of interest is that the supplier and the distributors have differing attitudes towards risk. In such a case, the two levels of the vertical structure make different trade-offs between profit maximization and the risk they want to bear.

Risk considerations may not only provide a rationale for the use of vertical restraints, they can also provide a rationale for a particular choice of restraint. It turns out that while different types of vertical restraints may bring about similar results in deterministic environments (as outlined in the above sections) this is much less the case in risk environments.⁴⁰

In order to explore the role of risk in the context of vertical restraints, Rey and Tirole⁴¹ set up a model of retail competition among differentiated retailers and analyzed the role of vertical restraints given uncertainty about future demand and cost levels.⁴² The retailers are better informed (ex post) about the realization of final demand and about their own costs than the supplier. The latter is assumed not to be able to obtain this information, directly or indirectly.⁴³ Hence, informational problems prevent the supplier from using contracts based on the true performance (profits) of the distributors.

Rey and Tirole consider two vertical restraints, resale price maintenance and exclusive territories, and compare them with the situation of unconstrained competition between differentiated retailers. The basic trade-off in the choice of contract is between the optimal exploitation of market power and the amount of risk that the distributors are willing to accept.

40. This is not to say that in deterministic environments vertical restraints always have similar effects. See Howard P. Marvel & Stephen McCafferty, *Comparing Vertical Restraints*, 48 J. ECON. & BUS. 473 (1996), for a comparison between resale price maintenance and exclusive territories. See also David Reiffen, *On the Equivalence of Resale Price Maintenance and Quantity Restrictions*, 17 INT'L J. INDUS. ORG. 277 (1999).

41. Patrick Rey & Jean Tirole, *The Logic of Vertical Restraints*, 76 AM. ECON. REV. 921 (1986). For a discussion, see also TIROLE, *supra* note 16, at 187.

42. For risk considerations to play a role, one should not only presuppose that there is uncertainty about the level of some demand or cost parameter but also that there is an asymmetry of information about this parameter. After all, if a supplier could observe, ex post, the realization of all parameters relevant to the distribution stage, he could structure the incentives for the distributor as in a deterministic environment, using contracts conditional on these parameters, as long as the relevant parameters are verifiable.

43. One of the explanations for this assumption is that the retailers can engage in arbitrage, making it impossible for the supplier to keep track of the supplies.

The optimal exploitation of market power requires, first, that one can adapt prices to local market conditions and, second, that one avoid the double marginalization problem associated with simple wholesale pricing. When there is uncertainty about market conditions but no difference in risk attitude between suppliers and distributors, a supplier is best able to exploit its market power by using exclusive distributors (in combination with an appropriate two-part tariff to deal with the double marginalization problem). The distributors, being local monopolists and being made residual claimants, will adjust their prices optimally to cost and demand conditions. If instead the supplier imposes resale price maintenance, the retail price is fixed and, hence, cannot respond to cost and demand shocks at all. The double marginalization problem is therefore only dealt with on average. Without either of these restraints, retail competition makes that the retail price is principally driven by cost conditions, rather than by demand conditions. Not all information is used, and the double marginalization problem is not addressed.

Whereas the ranking in terms of exploitation of market power is rather clear, the risk properties are more complex. When the retailers are more risk averse than the manufacturer, internal efficiency—i.e., efficiency from the viewpoint of the vertical structure—requires that the supplier shares some of the risk with the distributors. Exclusive territories generally have poor risk properties, despite the fact that exclusive distributors can adjust their prices to meet cost and demand changes. As their incentives are structured to be those of residual claimants, they are faced with substantial fluctuations in their profits when cost and demand conditions change. The risk properties of resale price maintenance depend on the type of uncertainty. With demand uncertainty, resale price maintenance tends to limit distributors' exposure to risk, in particular when the distributor margin is kept low by the supplier. With market wide cost shocks, distributors bear the whole risk as they cannot adjust the price level to these shocks. On the other hand, with distributor-specific cost shocks, resale price maintenance protects distributors against more efficient rivals.⁴⁴ Finally, unconstrained competition at the distributor level generally has good risk properties when the retail price is mainly cost driven. Under such circumstances, the response of retail profits to (marketwide) cost shocks is good and, given that competitive margins are not very large, the variability of retail profits with demand conditions is moderate as well.⁴⁵

The specific choice of vertical restraints depends, therefore, on the trade-off between the optimal exploitation of market power and the level of risk distributors are willing to accept. When risk is not too important, exclusive territories are likely to be an optimal

44. This may be important when the supplier wishes to attract enough retailers to distribute its products. See VINCENT VEROUDEN, *Resale Price Maintenance Under Cost Uncertainty: A Note on "The Logic of Vertical Restraints,"* in *ESSAYS IN ANTITRUST ECONOMICS* 149 (2001). An alternative interpretation is that resale price maintenance protects distributors against competition from other distributors who use the product as "loss leader."

45. In contrast, when competitive margins are mainly driven by demand, competition at the downstream level may have very poor risk properties. See Raymond Deneckere, Howard P. Marvel & James Peck, *Demand Uncertainty and Price Maintenance: Markdowns as Destructive Competition*, 87 *AM. ECON. REV.* 619 (1997). The setting of Deneckere and his colleagues differs from that of Rey & Tirole, *supra* note 41, in that retailers must order their inventories of the product before demand for it is known.

way to adjust to local circumstances. With very risk averse distributors, the objective to limit their risk dominates the desire for optimal exploitation of market power. The nature of the market uncertainty determines the supplier's choice regarding whether to use vertical restraints at all and the ranking of the preferred restraints.

2.5. Reducing transaction costs

From one point of view, the theory of vertical integration and vertical restraints is a special case of the theory of the firm. Accordingly, an alternative way to look at vertical linkages is as a way to minimize transaction costs, or to reduce them below market transaction levels.⁴⁶ Transaction costs can be understood as the usual costs of finding a trading partner and of drawing up and enforcing contracts, and also as inefficiencies that result from not being able to write comprehensive contracts.

In the first interpretation, the cost of finding a trading partner may lead companies to prefer longer term contracts. The desire to reduce the cost of drawing up and enforcing contracts may lead firms to limit the number of trading partners. Similarly, the logistics of dealing with trading partners may lead to a limitation of the number of trading partners. Frequency of trade is also an important element. If the same sort of bargain is to be concluded quite often, then it may make sense to devise a contracting framework to facilitate it.

The main elements in the second interpretation of transaction costs are the concepts of contract incompleteness and asset specificity. A contract is called complete when it covers all possible contingencies that may occur and has all the relevant decisions (on price, quantity, product characteristics, etc.) depend on verifiable variables (including, possibly, announcements by the parties, e.g., concerning their valuations, and costs). By contrast, when the contract does not cover all possible contingencies and, hence, leaves open what to do in those cases, a contract is called incomplete. At the origin of contract incompleteness is, of course, that it may be very costly (or even impossible) to write complete contracts.

Assets are specific to a transaction to the extent that they are more valuable within the scope of the transaction than outside the scope of the transaction. An example of asset specificity is when a distributor makes investments (e.g., in retail format) to suit the product range of the supplier and these investments are of little use for the distribution of other suppliers' products. Similarly, the provision of technical and commercial training provided by a supplier to a distributor is most useful when this distributor is effectively going to distribute for the supplier and not for some other supplier.

46. Michael Waterson, *Vertical Integration and Vertical Restraints*, in READINGS IN MICROECONOMICS 38 (Tim Jenkinson ed., 1996) (referring to Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937), reprinted in READINGS IN PRICE THEORY (George J. Stigler & Kenneth E. Boulding eds., 1952)); OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975); Oliver E. Williamson, *Transaction Cost Economics*, in 1 *HANDBOOK OF INDUSTRIAL ORGANIZATION*, supra note 1. Sanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 *J. POL. ECON.* 671 (1986), and Bengt R. Holmström & Jean Tirole, *The Theory of the Firm*, in 1 *HANDBOOK OF INDUSTRIAL ORGANIZATION*, supra note 1, formalized and further refined the analysis of Coase.

A crucial aspect of specific investment is that even though the supplier and the distributor may select each other *ex ante* (i.e., before making the investment) from a pool of competitive suppliers and distributors, they end up forming an *ex post* bilateral monopoly in the sense that they have an incentive to trade with each other rather than with outside parties. However, each party also knows that if there are no checks and balances on each other's behavior the parties may have an incentive to enter into opportunistic behavior the moment at which the other party has invested in an attempt to obtain a greater part of the surplus that is created. To the extent that a substantial part of the value of the investment has become stuck in the relationship, the party that has invested a lot finds itself in a weak bargaining position *vis-à-vis* the party that has not invested as much in the relationship. This perspective, the weak bargaining situation *ex post*, is likely to change the incentives to invest *ex ante* and to lead to investment levels that are too low from the viewpoint of the vertical structure.

In order to avoid these inefficiencies, it may be optimal for the parties to enter into contracts *ex ante*. If complete contracts could be written, the solution would be trivial: specify in the contract the investments that should be undertaken and the terms and conditions under which trade is to occur. In fact, it would not even be necessary to say anything about the investment levels in the contract. In particular, prespecifying the products, the selling prices, as well as the circumstances in which a sale is to take place, will do: in this case, the supplier is ensured that the distributor will not engage in opportunistic behavior.⁴⁷ Similarly, when it is the distributor who must make the specific investments, a guaranteed purchase price (whenever there are effectively gains from trade) will be sufficient.

However, when it is too costly or simply impossible to write complete contracts, internal efficiency cannot be attained (save in a few exceptional circumstances); after all, in the cases that a nonspecified contingency occurs and *ex post* bargaining must occur, the party that has less at stake may engage in the types of opportunistic behavior described above. In the realm of vertical restraints, one way to reduce the incentives to engage in such behavior would be to enter into contracts that provide for some kind of exclusivity. For example, when the distributor is the party that has to make the specific investments, a contract granting an exclusive territory to this distributor has the effect of reducing the outside opportunities for the supplier. As a result, the bargaining position of the distributor is improved and its incentives to invest have increased. Similarly, when the supplier is the party that has to make specific investments, an exclusive dealing contract prohibiting the distributor from dealing in rival products may have the effect of reducing the outside opportunities for the distributor.

Despite the insights obtained from the transaction cost/incomplete contracting approach, it is unfortunate that the approach typically does not address the question whether there are possible divergences between the private and social desirability of vertical restraints. The literature typically focuses on the private incentives of firms.⁴⁸

47. One may note that the transaction cost literature, with its emphasis on restoring the *ex ante* incentives to invest, has a flavor similar to the externalities-based literature. In a way, it is just the source of the investment problem that is different.

48. Waterson, *supra* note 46, at 39.

Nonetheless, according to Williamson, the transaction cost approach shows that vertical links can yield cost savings over a wider range of circumstances than the earlier market power approach indicated and that a more positive view of vertical contracts is warranted.⁴⁹

3. Anticompetitive motives: Foreclosure

The various settings considered up to this point address the ways in which vertical structures seek to improve the internal efficiency of the structure. While there are exceptions, generally vertical restraints inspired by an internal efficiency motive may well improve welfare. There exists, however, also a body of literature that has considered the ways in which vertical structures seek to reduce competition with rivals and the circumstances in which this is profitable.

This literature can be divided into two main lines of thought. The first is that vertical restraints may lead to foreclosure of market access, leading to a reduction of the ability of rival firms to compete. Most attention in this field has focused on the role of exclusive dealing contracts in foreclosing market access to suppliers.⁵⁰ The second line of thought is that vertical restraints may be used to “soften” the competition between suppliers or even to enact and enforce outright cartels. In this context, most emphasis is placed on the role of exclusive territories and resale price maintenance. The present section first describes the main theories of foreclosure. Section 4 addresses the “softening of competition” scenarios.

3.1. *Foreclosing market access to rival suppliers*

Exclusive contracts have long been considered in the literature as practices to reduce market access to actual or potential competitors, thereby increasing their costs or otherwise impairing their ability to compete. This motive is commonly referred to as foreclosure, exclusionary behavior, and raising rivals’ costs.⁵¹

A supplier’s profits are typically an increasing function of its rivals’ costs and prices. When there are substantial economies of scale and scope in distribution, signing exclusive contracts with particular distributors raises the distribution costs of other suppliers and reduces the possibilities to reach the market for new suppliers (entry barriers). In the extreme, when there is only one distributor available, exclusive dealing arrangements have the effect of completely foreclosing the market.

Whereas the above effects of exclusive restraints appear rather straightforward, foreclosure is not always rational. Indeed, one common question is the following: why would a distributor, in particular a monopolist, be willing to enter into exclusive dealing

49. See Williamson, *supra* note 46, at 176; see also Martin K. Perry, *Vertical Integration*, in 1 HANDBOOK OF INDUSTRIAL ORGANIZATION, *supra* note 1, at 189.

50. See Francine Lafontaine & Margaret Slade, *Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy*, in HANDBOOK OF ANTITRUST ECONOMICS (Paolo Buccirossi ed., forthcoming 2008).

51. Cf. Steven C. Salop & David Scheffman, *Rising Rivals’ Costs*, 73 AM. ECON. REV. 267 (1983); Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power over Price*, 96 YALE L.J. 209 (1986).

agreements with suppliers and forego the opportunity to also deal with other, possibly more interesting suppliers? As Robert Bork has pointed out, the distributor would only accept such an arrangement if it were compensated in some way.⁵² In this sense, the problem may not be so much that the supplier will not desire to exclude a competitor, but that—in the absence of internal efficiency benefits of the type described in the previous section—the cost of inducing a distributor to sign an exclusivity arrangement may not make such a restraint profitable.

One formalization of this intuition has been provided by Mathewson and Winter.⁵³ They consider a model in which two suppliers sell differentiated products through a local monopoly distributor. Foreclosure occurs when one supplier (the firm which is the more efficient or making the better product) offers an exclusive dealing contract with a wholesale price low enough to make it more profitable for the distributor to accept this contract than to accept an exclusive contract from the other supplier. Whether or not exclusive dealing is profitable depends on the question of how much the firm with the cost or product advantage (the dominant firm) has to lower its wholesale price to obtain exclusivity. When the two suppliers are fairly close contenders in costs or product terms, it follows that exclusive dealing is unlikely to occur because it is unprofitable for the supplier with the cost or product advantage. It is more likely when there are significant differences between the two suppliers.⁵⁴ Bork's implicit assumption that the retailer has some bargaining power turns out to be also important in this context. In the setting of Mathewson and Winter, where the retailer cannot be certain to be supplied by both suppliers if it so wished,⁵⁵ exclusive dealing appears not in all cases in the interest of the consumers.⁵⁶

The issue of the rationality of foreclosure touches upon a more general point. As explained in the introduction to this chapter, competition between companies operating at the same level entails a horizontal externality: all companies would be better off if they were to behave less competitively. An obvious way to internalize this externality is to vest all of the decision-making power in a single economic actor (who could then act almost as a cartel manager for the upstream firms). So, the question is: why does

52. See BORK, *supra* note 5, at 306.

53. G. Frank Mathewson & Ralph A. Winter, *The Competitive Effects of Vertical Agreements: Comment*, 77 AM. ECON. REV. 1057 (1987). Another, and somewhat less sophisticated formalization, is that of William S. Comanor & H.E. Frech III, *The Competitive Effects of Vertical Agreements*, 75 AM. ECON. REV. 539 (1985). The contribution of Mathewson and Winter was a response to their article.

54. The more the two suppliers are similar, the more they have to compete hard against each other to obtain exclusivity. As is often the case in auction settings, the party soliciting bids (here, the retailer) captures a greater part of the gains from trade when the bidders (here, the suppliers) are close contenders.

55. Mathewson and Winter only partially capture Bork's setting, as they assume that the distributor is one of many local monopolies that are being served by the "dominant" supplier and that, as a result, the relative bargaining power of the distributor is negligible. This implies that the distributor is not able to "force" the two suppliers to deal with him.

56. For exclusive dealing to be beneficial to consumers, no supplier must be too dominant. It is only when suppliers compete hard for exclusivity that wholesale prices will be low and that consumers may benefit from these low retail prices.

foreclosure occur in the first place, if the distributor might as well serve as a common agent for the two suppliers?

The explanation must lie in the bilateral exclusive contract being jointly more profitable for the two contracting parties than a situation of common agency. Bernheim and Whinston⁵⁷ have formally explored the argument in a setting similar to, but more general than that of Mathewson and Winter. They show that the profitability of having a common distributor—and, hence, the choice of representation resulting in the market—critically depends on the presence or absence of externalities in the competitive provision of incentives by the two suppliers, leading to contracting inefficiencies. By way of definition, contracting inefficiencies are present when the joint surplus of the suppliers and the distributor under competitive contract offerings is less than what could be achieved if the suppliers were to cooperate in their contract offerings.

When there are no contracting externalities, common agency will necessarily be the optimal distribution form. After all, selling both products is jointly more profitable than only selling one whenever products are differentiated. When no restrictions are placed on the types of price schedules that can be used,⁵⁸ the joint surplus can be obtained by delegating the actions to the agent and making him the residual claimant, for instance through the use of an optimal wholesale price equal to marginal cost and a franchise fee. In essence, the business is effectively “sold out” to the agent and the agent realizes the maximum industry profit.

With a single distributor in the market, it is only when there are certain contracting externalities that exclusive dealing may arise in equilibrium. One such contracting externality underlies the result of Mathewson and Winter described above. In their setting, each supplier was restricted in its choice of contract, in the sense that it can influence the distributor only by means of a linear wholesale price, i.e., a constant price per unit. This implies that the suppliers cannot use the type of “sell out” contract described above: for a supplier to make some profit, it is necessary to keep a wholesale price margin which is positive. In essence, although the two suppliers use a common agent which in principle could neutralize their competition, the horizontal negative externality that normally exists when companies compete resurfaces again. As wholesale margins are positive under linear prices, each supplier does not take the positive margin of the other supplier into account when offering incentives under common distributorship. Because a positive wholesale margin distorts the pricing incentives of the common agent, the agent will not maximize industry profits and will not perceive the full opportunity costs of exclusive dealing. In equilibrium, the agent’s perceived opportunity cost of exclusive dealing is less than the corresponding cost to the two suppliers in combination. Consequently, exclusive dealing may result instead of common distributorship.

57. B. Douglas Bernheim & Michael D. Whinston, *Exclusive Dealing*, 106 J. POL. ECON. 64 (1998); B. Douglas Bernheim & Michael D. Whinston, *Common Marketing Agency as a Device for Facilitating Collusion*, 16 RAND J. ECON. 269 (1985); B. Douglas Bernheim & Michael D. Whinston, *Common Agency*, 54 ECONOMETRICA 923 (1986); see also Ilya R. Segal, *Contracting with Externalities*, 114 Q.J. ECON. 337 (1999); MICHAEL D. WHINSTON, LECTURES ON ANTITRUST ECONOMICS ch. 4 (2006).

58. Mathewson and Winter, *supra* note 53, considered only linear wholesale tariffs.

Another circumstance in which contracting externalities can arise is when suppliers must serve more than one market to achieve scale economies. In such a context, exclusion may result because the signing of an exclusive contract in one market has knock-on effects in other markets that are not fully taken into account by the distributor. Alternatively, contracting inefficiencies can arise when incentive provision is costly because of informational asymmetries that lead to adverse selection or moral hazard problems on the part of the distributor.⁵⁹

When the distributor is not a monopolist but instead faces competition from other distributors, it may be less able to serve the role of a successful common agent. Profits at the distribution level tend to be dissipated due to competition, so that there is less scope for “selling out” the business to any given agent.⁶⁰ Under these circumstances, exclusive distribution may result more often as a market outcome.

The above argumentation relates to settings in which suppliers compete for the right to become the exclusive supplier in a context where they are simultaneously bidding for representation. A different perspective arises when one supplier, for instance an incumbent supplier, has a first-mover advantage. This timing aspect provides additional scope for exclusive dealing to be profitable.

An illustration is given by Aghion and Bolton⁶¹ who consider a monopoly supplier facing potential entry into its market. The efficiency level of the entrant is not known to the incumbent supplier *ex ante*. Aghion and Bolton show that a long-term exclusive contract between the incumbent supplier and a (sole) distributor that stipulates a penalty clause in the case of prior termination is a profitable entry deterrent. The optimal penalty clause has the effect of deterring entry, but not always: when the entrant’s cost is very low, it will enter and reimburse the distributor for the penalty it has to pay to the incumbent supplier. As a result, the contract has the effect of extracting (part of) the surplus of the future entrant. This expected benefit of the penalty clause allows the supplier to compensate the dealer in the form of a lower wholesale price for the goods to be traded.⁶²

Distributors may also find it worthwhile to accept exclusive contracts by an incumbent supplier when they can be played out against each other. Rasmussen, Ramseyer and Wiley⁶³ have shown that this may occur when entry by an alternative supplier requires sufficient scale. By signing up exclusive contracts with a sufficient number of distributors the incumbent supplier may be able to deny market access to the upstream entrant. This exposes the distributors without a contract to the monopoly power of the incumbent supplier. The extra rents that can be achieved in this way can be

59. See also David Martimort, *Exclusive Dealing, Common Agency, and Multiprincipals Incentive Theory*, 27 RAND J. ECON. 1 (1996).

60. See Patrick Rey & Thibaud Vergé, *The Economics of Vertical Restraints*, in HANDBOOK OF ANTITRUST ECONOMICS (Paolo Buccirossi ed., forthcoming 2008).

61. Philippe Aghion & Patrick Bolton, *Contracts as a Barrier to Entry*, 77 AM. ECON. REV. 388 (1987).

62. Note that in this setting it is not in the interest of the supplier to foreclose the market completely and always deter entry. A high penalty reduces the risk of entry but, at some point, also reduces the expected payment to be received.

63. Eric B. Rasmussen, J. Mark Ramseyer & John S. Wiley, *Naked Exclusion*, 81 AM. ECON. REV. 1137 (1991).

used by the incumbent to compensate the group of distributors who accepted exclusivity early on. This reasoning does require, however, that distributors are somehow limited in their ability to expand. If a given distributor could easily increase market share by being more efficient it is not clear why an entrant could not enter, supply a given distributor at low cost in order to make it gain market share, and thereby achieve the scale necessary for entry. Accordingly, exclusive dealing can normally only deter entry when competition between the distributors is sufficiently weak.⁶⁴

Comanor and Rey⁶⁵ have provided for yet another reason as to why a distributor may want to accept exclusive contracts in a dynamic framework. If the incumbent supplier can set up a distribution network of its own, albeit perhaps at higher cost, the decision to switch to the entrant supplier may trigger competition between two vertical structures, namely, the distributor and the entrant supplier versus the incumbent supplier and its network.⁶⁶ This competition has the effect of dissipating the profits in the industry. To the extent that the combined profits of the distributor and the incumbent supplier suffer, it is in their mutual interest to enter into an exclusive contract.

3.2. *Foreclosing market access to rival distributors*

Many foreclosure concerns in the context of vertical restraints relate to exclusive dealing contracts, which allow suppliers to limit competition from rival suppliers.⁶⁷ Distributors may also seek exclusivity from a supplier, to reduce the *downstream* competition. For example, when a supplier is the sole supplier, an exclusive sales territory has the effect of removing rival distributors from the market. More generally, by signing up an exclusive contract with an important upstream supplier, a distributor may be able to raise its rivals' costs of obtaining supplies, which may subsequently allow it to charge higher prices at the distribution level.⁶⁸

One variant of this theory is that if there is substantial market power upstream, a distributor may raise its rivals' costs by changing the degree of competition upstream.⁶⁹

64. For a formalization, see Chiara Fumagalli & Massimo Motta, *Exclusive Dealing and Entry, When Dealers Compete*, 96 AM. ECON. REV. 785 (2006). The original model of Rasmussen, Ramseyer and Wiley, *supra* note 63, in fact supposed that the downstream firms are final buyers of the good; this implicitly assumes that the downstream firms resell on independent markets, that is, act as local monopolists.

65. William S. Comanor & Patrick Rey, *Vertical Restraints and the Market Power of Large Distributors*, 17 REV. INDUS. ORG. 135 (1998).

66. It is assumed that the incumbent supplier can distribute its product through a new network, whereas the entrant supplier cannot. One interpretation is that the entrant supplier's product lacks market recognition and can be successfully sold only through an established influential distributor. The switch to the entrant supplier may also be understood as the distributor also selling the entrant's product. The context of Comanor and Rey, *supra* note 65, is focused on an incumbent distributor facing a low-cost competitor, but the situation is comparable.

67. See Lafontaine & Slade, *supra* note 50.

68. Early references in this context are Salop & Scheffman, *supra* note 51, and Krattenmaker & Salop, *supra* note 51.

69. Krattenmaker & Salop, *supra* note 51. For a formalization of the argument in the context of vertical mergers, see Janusz A. Ordover, Garth Saloner & Steven C. Salop, *Equilibrium Vertical Foreclosure*, 80 AM. ECON. REV. 127 (1990).

When one supplier enters an exclusive contract with the distributor, the remaining suppliers may end up having more residual market power, which translates into higher wholesale prices for other distributors. This may subsequently enable the distributor with the exclusive contract to charge higher prices. In this version, the theory of raising rivals' costs is one of *exposing rivals to double marginalization*.⁷⁰ It must be said, however, that the double marginalization aspect of the theory also has a certain weakness: the result disappears as soon as the rival suppliers and distributors can use two-part tariffs to eliminate the double marginalization problem.

In principle, one could ask similar questions as to the rationality of these arrangements as in the context of exclusive dealing arrangements.⁷¹ For instance, if the distributors are differentiated and consumers appreciate this, why would the supplier agree to deal with only one of them? The various first-mover arguments presented in the previous section are, *mutatis mutandis*, also relevant in the present context: Incumbent distributors may want to deter entry by new distributors and a first-mover advantage may allow them to sufficiently compensate suppliers. Also, to the extent that the vertical agreement effectively leads to higher prices downstream, total industry profit increases. This may enable the distributor to attract a supplier to sign an exclusive agreement.⁷²

3.3. *Foreclosure as a commitment device*

Also when there is no need to be concerned about (potential) competition from other suppliers, it is possible that a supplier may want to explicitly exclude some distributors from its market operations and deal with only one of them. Let us consider a monopoly supplier that faces no potential competition. According to Chicago economists such as Bork, if this monopolist supplier were to use exclusive contracts it would do it for efficiency reasons, not for the purpose of raising prices. After all, a monopoly rent can only be earned once: it is not possible to further increase this rent through exclusive contracts. However, Hart and Tirole⁷³ argue that one should not take for granted that a supplier with market power is able to exploit this market power when it lacks the means to commit.

Consider the case of a franchisor who is considering opening up a retail outlet in a given city. If it sells the right to operate the outlet to a single franchisee, this company can operate the only outlet of this kind in the city and earn a monopoly profit. The standard argument would then be that the franchisor could earn the monopoly profit on its franchise, as the franchisee would be willing to pay up to monopoly profit to obtain

70. Cf. Ordovery, Saloner & Salop, *supra* note 69.

71. See *supra* Section 3.1.

72. The arguments brought forward by Bernheim and Whinston, *supra* Section 3.1, which are based in essence on the observation that it may be beneficial to avoid price competition by using a common agent, are less relevant in this context.

73. Oliver Hart & Jean Tirole, *Vertical Integration and Market Foreclosure*, BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 205 (1990); see also Patrick Rey & Jean Tirole, *A Primer on Foreclosure*, in 3 HANDBOOK OF INDUSTRIAL ORGANIZATION 2145 (Mark Armstrong & Robert Porter eds., 2007). Daniel O'Brien & Greg Shaffer, *Vertical Control with Bilateral Contracts*, 23 RAND J. ECON. 299 (1992), studied the commitment problem as well, from a slightly different angle.

it. However, this argument does not necessarily work if the franchisor can sell the franchise right more than once. Intuitively, a commitment problem arises because after having sold the franchise to one party at the monopoly profit the franchisor has an incentive to sell still additional franchises to other interested parties. The fact that these additional franchises harm the first party does not directly impact on the franchisor.⁷⁴ The first company that is offered the franchise at the monopoly price anticipates this incentive, however. Therefore it will not accept the offer. This means that the supplier will not be able to realize the monopoly profit, even though it is a monopolist. It is only by committing to sell only one franchise in a given city or by operating the outlet itself that it can earn the monopoly profit.

A similar argument may apply when a company supplies various competing distributors and the supply contracts are secret or secretly renegotiable. Once the supplier has contracted with one party, it tends to take these sales for granted and may be tempted to explore further opportunities.⁷⁵ A solution is for the supplier to effectively tie its hands by signing an exclusive distribution contract with one distributor. Industry-wide resale price maintenance, if this were enforceable, would be another option. Both vertical restraints would have the effect of taking away the incentive for the supplier to flood the market and of restoring its market power. Obviously, the greater the market power to be restored, the greater the incentives to use vertical restraints as a commitment device.

4. Anticompetitive motives: Softening competition

In the preceding section we investigated firms' abilities to use vertical restraints to foreclose markets. The number of cases in which foreclosure is profitable as a result of, for example, raising entry barriers may be limited. Also in the absence of foreclosure possibilities, however, vertical restraints can be used to reduce competition in a strategic way. Two variants can be distinguished. First, vertical restraints may be used to soften the competition between suppliers. Second, they may be used to enact and enforce outright cartels.

4.1. Softening competition

Because vertical restraints directly affect the nature of downstream intrabrand competition between distributors, they also affect the competitive behavior of the supplier whose product is sold by the distributors. This, in turn, may alter the nature of upstream interbrand competition. Accordingly, vertical restraints may be used strategically by a supplier as a means to commit itself to act in a certain way vis-à-vis its rivals.

Rey and Stiglitz⁷⁶ consider the case of two suppliers of differentiated products using exclusive territories as a device to reduce competition between themselves. When there

74. Leaving reputation issues aside.

75. A number of assumptions are important in this context. If the distributors had symmetric beliefs, believing that the supplier offers identical contracts to all distributors, the commitment problem would largely disappear.

76. Rey & Stiglitz, *supra* note 15.

is unrestricted competition on the distribution level for a particular product, the final price at which distributors sell closely follows their cost and, in particular, the wholesale price set by the supplier. With exclusive territories, a distributor, as a consequence of being given some monopoly power, has more freedom in its price-setting behavior. When the supplier reduces its wholesale price, this distributor will pass on only part of the reduction to the customers. Furthermore, to the extent that distributors of the rival product also have some power over price and can observe the reduction of the wholesale price, they will react by lowering their selling price. Both effects make demand as perceived by the supplier less elastic. They lower the increase in demand that can be expected by a supplier when it reduces its wholesale price, thus making the supplier inclined to raise the wholesale price. The rival vertical structure will anticipate this and behave less competitively in selling its product. As a result, the final selling prices and profits will end up higher than would be the case if the products were distributed through unrestricted distribution systems or, indeed, directly by the suppliers themselves. Hence, the suppliers can find it in their individual and joint interest to employ exclusive distribution.⁷⁷ The attractiveness of such a strategy increases with the degree of market power that the suppliers and the distributors have on their respective levels of operation.

Exclusive dealing arrangements can also be used to soften competition between upstream suppliers. An argument traditionally brought forward in this context is that exclusive dealing arrangements have an effect on consumer search costs. When all suppliers use exclusive dealers and dealers are spatially differentiated consumer search costs are higher than they would be if distributors carried the products of several suppliers instead of only one. This tends to discourage consumers from comparison shopping, limiting the extent of interbrand competition and raising industry profits. Alternatively, exclusive dealing arrangements may enhance the degree to which the suppliers' products are differentiated, by combining the inherent product differentiation with distributor level differentiation. Besanko and Perry⁷⁸ consider a model in which there are two suppliers of differentiated products and retailers are spatially differentiated. Assuming free but costly entry into retailing, they show that exclusive dealing allows the suppliers to achieve higher wholesale price margins due the absence of in-store interbrand competition and cost savings stemming from the reduction in the number of retailers of each brand. It must be said, however, that this result is somewhat biased by the underlying assumption that suppliers can only use linear wholesale tariffs. After all, this restriction leads to exactly the type of contracting externality discussed by

77. The fact that the contract between a supplier and its distributor is observable to the other supplier is important but not vital. Also when contracts are unobservable, exclusive distribution arrangements can still have an effect on the market outcome. For this to be the case, it must be that each supplier-distributor combination can somehow anticipate that the other combination uses a wholesale price that exceeds marginal cost. This will, for example, be the case when, for legal reasons or risk-sharing considerations, the suppliers cannot use fixed fees to obtain profits. Similar observations can be made in the context of slotting allowances paid to retailers. Cf. Greg Shaffer, *Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices*, 22 RAND J. ECON. 120 (1991).

78. David Besanko & Martin K. Perry, *Exclusive Dealing in a Spatial Model of Retail Competition*, 12 INT'L J. INDUS. ORG. 297 (1994).

Bernheim and Whinston.⁷⁹ When suppliers can use general wholesale price schedules, exclusive dealing is likely to result less often, precisely because common representation is by itself a means to coordinate downstream competition.

In a related article, Besanko and Perry⁸⁰ do recognize the fact that exclusive dealing may intensify competition rather than soften it. Indeed, the focus of that article is the efficiency reason for exclusive dealing identified by Marvel,⁸¹ namely, that it eliminates an upstream externality problem that may exist when suppliers provide services or make investments for distributors that they have in common. The elimination of the upstream externality through exclusive dealerships leads suppliers to increase their investments in their distributors, thus intensifying competition in this dimension. This strategic effect on the competitive equilibrium may reduce the attractiveness of exclusive dealing altogether. As a result, suppliers may wish to maintain the externality by opting for common representation.⁸²

The role of price restraints in softening competition has also received recent attention in the literature. Rey and Vergé⁸³ study how resale price maintenance contracts that are purely vertical may limit both intrabrand and interbrand competition. They consider a model with two suppliers that use two common distributors. The existence of competition at the upstream and downstream level implies that the retail price will always be below the monopoly price and that the monopoly industry profit cannot be realized.⁸⁴ Resale price maintenance may, however, be an instrument to obtain monopoly profits. In part, this is because resale price maintenance restores the possibility of any given distributor to act as a successful common agent. As the distributor faces no intrabrand competition selling out the business to the distributor becomes more profitable. Under natural demand elasticities, Rey and Vergé show that there exists a market equilibrium where the suppliers use resale price maintenance leading to the monopoly retail price. The extent to which the results continue to hold when double-common agency is not an equilibrium configuration, however, is not entirely clear.

4.2. *Facilitating cartel enforcement*

Beyond softening competition in the sense described in the above section, vertical restraints may also serve to facilitate outright cartel agreements. Typically, vertical restraints eliminate or at least reduce downstream competition. Resale price maintenance, for example, has the effect of eliminating all price competition between distributors. As a result, competing distributors may be tempted to exert pressure on their supplier(s) to impose such vertical restraints. Distributors may therefore use

79. See *supra* Section 3.1.

80. David Besanko & Martin K. Perry, *Equilibrium Incentives for Exclusive Dealing in a Differentiated Products Oligopoly*, 24 RAND J. ECON. 646 (1993).

81. Marvel, *supra* note 35; see *supra* Section 2.3.

82. Besanko and Perry's more specific results depend again on the assumption that only linear wholesale prices can be used.

83. Patrick Rey & Thibaud Vergé, *Resale Price Maintenance and Horizontal Collusion* (University of Bristol CMPO, Working Paper 02/047).

84. See the earlier discussion on common agency when the agent faces competition (Section 3.1, *supra*).

vertical restraints to maintain and enforce a cartel while circumventing antitrust laws prohibiting price-fixing behavior. For such practices to occur, it does appear that the distributors must be in a particularly strong position vis-à-vis the supplier(s); it is unlikely that suppliers will generally be enthusiastic about unnecessarily high margins on the distribution level.

The use of vertical restraints has also been linked to the desire of suppliers to maintain collusion at the upstream level. Typically, individual firms have incentives to cheat on any collusive agreement so firms must be able to monitor each other in order to collude successfully. Resale price maintenance may be instrumental in this respect. Absent resale price maintenance, it may be difficult to tell if the retail price has dropped because one supplier has cheated on the collusive agreement or because one of its distributors has chosen to lower its final price on its own initiative, for example, in response to local market conditions. Under resale price maintenance, final selling prices are centrally set by the respective suppliers, in which case it is simpler for these firms to monitor potential cheating.

A formalization has recently been provided by Jullien and Rey.⁸⁵ Their paper emphasises that, while resale price maintenance can make it easier to detect deviations from a cartel agreement, the reasons that make it hard to enforce the cartel agreement in the first place, e.g., uncertainty about demand or cost conditions, also tend to reduce the profitability of resale price maintenance. After all, if resale price maintenance is imposed on distributors, these distributors cannot use localized information, which leads to an imperfect realization of monopoly profits.⁸⁶ In this sense, there is a trade-off between the enforceability and the profitability of the cartel agreement.⁸⁷

It has also been argued that resale price maintenance might be used to reduce the suppliers' incentives to make secret wholesale price cuts.⁸⁸ After all, when the distributors are unable to openly reduce the price at which they can sell the product to final consumers, the only way in which a lower wholesale price can induce additional sales is by indirect means (e.g., occasional secret price cuts, extra service provision, promotional activity). It must be noted that this argument is valid only when the monitoring of the collusive arrangement is watertight; if not, the supplier and the distributor could simply team up in making secret price cuts at the wholesale and retail levels.

85. Bruno Jullien & Patrick Rey, *Resale Price Maintenance and Collusion*, 38 RAND J. ECON. 983 (2007). In order to study how vertical restraints can be used to maintain collusion, Jullien and Rey build on Edward J. Green & Robert H. Porter, *Non-Cooperative Collusion under Imperfect Price Information*, 52 ECONOMETRICA 87 (1984), and Dilip Abreu, David Pearce & Ennio Stacchetti, *Optimal Cartel Equilibria with Imperfect Monitoring*, 39 J. ECON. THEORY 251 (1986): the suppliers use punishment strategies in order to maintain collusion. In response to information transmitted through observed market outcomes, the punishment can be triggered or not. In the absence of resale price maintenance, retail prices react to the distributor's private information, which makes it hard to detect a deviation from collusive behavior.

86. The imperfect realization of monopoly profits, in turn, increases the incentive to deviate.

87. In addition to an effect on the detection possibilities, Jullien and Rey, *supra* note 85, show that resale price maintenance also has an effect on the punishment possibilities.

88. *Cf.* Telser, *supra* note 31.

5. Empirical findings

The empirical literature on vertical restraints is, in comparison with the theoretical literature, not extensive. Two recent overviews of the literature are given by Lafontaine and Slade⁸⁹ and by Cooper, Froeb, O'Brien, and Vita.⁹⁰ Lafontaine and Slade note that in most western economies a large fraction of retail sales through independent retailers is subject to some form of exclusive dealing clauses. In the United States, this would be over a third,⁹¹ mostly in the context of franchise agreements.

The empirical approaches to study the impact of vertical restraints can be grouped into three broad classes.⁹² The first is to compare prices, profits, service levels, or other variables of interest across firms or regions, some of which employ a vertical restraint and some of which do not (cross-section/panel data approach). The second is to analyze the development of such variables following an actual change in the legal environment (natural experiment/event study). The third approach does the same but on the basis of developments in profit forecasts surrounding such changes—as embodied in companies' share prices—serving as a proxy for actual developments in the product market (stock market event study).

An interesting example of an event study is provided by Ippolito and Overstreet,⁹³ who combine the second and third approach to assess the impact of a Federal Trade Commission decision that effectively put an end to the policy of resale price maintenance used by Corning Glass Works, a U.S. manufacturer of kitchenware. They observed that Corning lost market share in the years following the forced abandonment of resale price maintenance. Further, while Corning's stock price suffered negative abnormal returns when the Federal Trade Commission complaint was announced, principal rival Anchor Hocking enjoyed a positive abnormal return. Ippolito and Overstreet conclude on this basis that an efficiency rationale (increasing the number of outlets carrying the product and improving the image of the product) appears to be a more likely explanation of Corning's past policy of resale price maintenance than any of the anticompetitive motives.

Both the survey of Lafontaine and Slade and that of Cooper and his colleagues show that in fact most empirical studies of vertical restraints have identified a procompetitive rationale behind the restraints studied. While this suggests that a generally benign view on vertical restraints is indeed appropriate, the practical implications for antitrust policy are less clear. In particular, it is not clear what proportion of the empirical studies is actually about cases or sectors involving a high degree of market power.⁹⁴ In other words, the empirical studies may not be very informative for antitrust cases, which normally involve market power.

89. Lafontaine & Slade, *supra* note 50.

90. James C. Cooper, Luke M. Froeb, Dan O'Brien & Michael G. Vita, *Vertical Antitrust Policy as a Problem of Inference*, 23 INT'L J. INDUS. ORG. 639 (2005).

91. U.S. DEP'T OF COMMERCE, FRANCHISING IN THE ECONOMY: 1986-88 (1988).

92. Lafontaine & Slade, *supra* note 50.

93. Ippolito & Overstreet, *supra* note 29.

94. Lafontaine and Slade mention that the retail markets examined in their survey are "relatively competitive." Lafontaine & Slade, *supra* note 50, in the conclusions.

Further, one may ask questions about the usefulness of aggregate empirical results on vertical restraints when these restraints are in reality very heterogeneous, both in rationale and impact. For instance, the anticompetitive rationale of exclusive dealing is often thought to be one of foreclosure, whereas resale price maintenance and exclusive territories are more often associated with softening competition. It is not a priori clear to what extent empirical findings on one practice can be informative on the other practice.⁹⁵

6. Conclusions

In this chapter, we have elaborated upon two possible motives underlying the use of vertical agreements, the efficiency motives and the anticompetitive motives. The fact that vertical agreements are agreements concluded between companies in a vertical relationship—that is, between companies that both fulfil a complementary function in putting the product on the market—suggests that they can often be regarded as positive: in a vertical relationship it so works out that one party will be damaged when the other party does not function properly. And properly means, in by far most cases, properly from the point of view of the consumers: in the end, they are supposed to buy the product. Through this special interdependent relationship, every party in a vertical agreement can, in principle, be considered a natural ally of the consumer.

Vertical agreements can have negative consequences from the welfare point of view, however. When they lead to the foreclosure of markets or when they soften competition, it is appropriate to act against them. The number of cases in which this will be necessary is, however, limited. It transpires that vertical restraints are unlikely to have detrimental effects when there is no market power on either level of the industry. This conclusion works in two ways. First, when there is sufficient interbrand competition consumers are likely to benefit from the agreement in question as competition will force sellers to pass possible efficiency gains on. As a bottom line, it is highly improbable that consumers will suffer in this case, since there are plenty of alternatives available. Secondly, the analysis also shows that the strategic effects, e.g., the use of vertical agreements to soften competition, are less strong when competition in the product market is fiercer. Similarly, market foreclosure is difficult to achieve when there are many players at both levels of the industry.

As for possible distinctions between the types of vertical restraints, it emerges from the literature that the type of the restraint does not itself determine whether it will increase or decrease economic efficiency. As indicated by the many examples given in the above sections, a particular contract provision may have either beneficial or detrimental effects, depending on the context. This observation has led some commentators to the conclusion that the per se prohibition of price restraints present in many legal systems is, in fact, inappropriate.⁹⁶ I would agree to that. Still, there is

95. For similar views, see Frederic M. Scherer, *Comment on Cooper et al.'s "Vertical Restrictions and Antitrust Policy,"* 1 COMP. POL'Y INT'L 65 (2005).

96. See, e.g., Seabright, *supra* note 9, at 182; Eric van Damme, *Verticale Mededingingsafspraken*, 46 SOCIAAL ECONOMISCHE WETGEVING 1, 14 (1998); see also Brief of *Amici Curiae* Economists in

something to say for a policy which is tougher on price restraints than on nonprice restraints.

The most important element in this respect is that resale price maintenance appears to provide a better means for monitoring cartel agreements than the use of exclusive territories or other nonprice restraints. Resale price maintenance eliminates price variability altogether whereas an exclusive distributor will still respond to local demand and cost variations. Furthermore, from a practical point of view, it may be more feasible and cheaper to support a cartel agreement using resale price maintenance than on the basis of a rigorous and costly rearrangement of the whole distribution system.⁹⁷ Finally, in terms of potential damage control, one could say that where resale price maintenance has a direct effect on preventing intrabrand price competition, exclusive territories work indirectly and need not mean that competition is totally ruled out, as consumers may be able to turn to other sales areas in order to purchase the product.

All in all, while an a priori distinction between price restrictions and nonprice restrictions is theoretically not defensible and, hence, it would make more sense to leave all options open, resale price maintenance does seem to bear a number of risks that, in my perception, seem more difficult to check than those associated with nonprice restraints. In this sense, an a priori distinction may be the type of policy guidance (*cf.* Section 1) that is required to make an antitrust policy effective in fighting collusion. As indicated, this does not mean that one should stick to a policy prohibiting resale price maintenance. In particular, one might consider the option of lifting the ban for small market participants. Nonetheless, a policy that is generally more cautious with price restraints than with nonprice restraints may be appropriate.

A final issue is the question to what extent full vertical integration should be treated differently from partial integration in the form of vertical restraints. Here again, while there are many commonalities in both their intent and effect, there is one noticeable difference that merits close attention: the commitment effect. For example, the softening of competition effect that arises when suppliers with market power delegate their pricing decisions to distributors with market power depends on the supply level and the distribution level not being integrated.⁹⁸ Similarly, suppliers may want to give their distributors more pricing flexibility in order to make them respond more aggressively against potential competitors.⁹⁹ In both examples, the vertical restraints lead to outcomes that are worse for welfare than what would be the case with full integration.

Support of Petitioner, *Leegin Creative Leather Prods. v. PSKS, Inc.*, 127 S. Ct. 2705 (2007) (No. 06-480).

97. This argument is not totally adequate as the rigorous and costly rearrangement may be exactly the sort of credible commitment required to sustain collusion. What is meant here are situations in which the rearrangement of the distribution system is not an option (think of products that are typically sold in many outlets in a given city or area). It is difficult to see, for instance, music companies supporting a cartel in CDs or DVDs based on exclusive distributors in order to obtain the required price transparency.
98. *See supra* Section 4.1.
99. Recall that distributors, in making their pricing decisions, do not take into account the possible effects on the profits of the upstream supplier: this is the double marginalization problem. This may make them more aggressive when being faced by potential entry. *See Rey & Stiglitz, supra* note 15.

In this sense, vertical restraints should not be thought of, in welfare terms, as an intermediate between no linkage and full integration. A policy that imposes greater scrutiny on vertical restraints than on full vertical mergers need, therefore, not be inappropriate.