

Vertical restraints – an economic perspective

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A. Methodology

This report surveys the economics literature on vertical restraints, in the view of drawing its relevant policy implications. After a general overview of the various pro- and anti-competitive effects identified by the literature, the report illustrates the policy implications by focusing on a particular restraint, namely, *Resale Price Maintenance*, which provides a good basis for such a discussion, both because it has many of the pro- and anti-competitive effects and because it has been hotly debated in practice – which has led different authorities to adopt different attitudes and, for some authorities, to change their attitudes over time.

B. Report

I. Introduction

This report surveys the economics literature on vertical restraints and draws its relevant implications for the enforcement of competition law. After a general overview of the various pro- and anti-competitive effects identified by the literature, the report illustrates these policy implications by focusing on a particular restraint, namely, Resale Price Maintenance.

The report is organized as follows. This introductory section offers an overview of vertical restraints, i.e., of the various provisions often used in vertical agreements, and briefly discusses the principles of the Chilean Competition Law. Section II surveys the economic literature on vertical restraints. Section III illustrates its policy implications for resale price maintenance. Section IV summarizes the analysis and provides policy recommendations.

1. Vertical restraints

Vertical relationships between firms and their suppliers, or firms and their distributors, often rely on contractual provisions, broadly labeled “vertical restraints”, that go well beyond the use of simple wholesale prices. These provisions may for example specify more general terms for payments, as well as undertakings about either party’s behavior. We briefly describe below the most common vertical restraints.¹

¹ This presentation builds on the classification proposed in OECD (1994).

a. Payment schemes

Whereas a uniform wholesale price amounts to a linear tariff, where the payment is proportional to the quantity bought, firms often rely on *non-linear tariffs* such as franchise fees (which may be based on location, expected profit, and so forth, but are independent from the quantities actually exchanged), progressive or so-called fidelity rebates, and on the quantity bought by the distributors (quantity discounts). The extent to which such non-linear tariffs can be enforced depends on the informational and institutional context; for example, distributors could manipulate progressive quantity rebates by “pooling” their orders.

Royalties represent another form of payment, based on the buyer’s downstream activity (usually measured in terms of sales, profit or revenue). These various payment structures directly affect the division of profits between the contracting parties; but they also indirectly affect their behavior, and thus the aggregate profit that the vertical agreement can generate.

b. Provisions specifying the parties’ rights

Various provisions have a direct bearing on the contracting parties’ behavior. For example, under *Resale price maintenance* (RPM) the final price charged by a retailer is set by the manufacturer. This restriction has several variants, including price ceilings, price floors, non-binding “recommended” or advertised prices. Here as well, enforcement may be an issue; for instance, imposing price floors supposes that “price cuts” (including those in the form of non-monetary concessions such as free services or delivery) can be detected at reasonable cost.

Quantity fixing specifies instead the quantity to be traded. Variants of this restraint include quantity forcing, which imposes a minimum amount to be purchased, and quantity rationing, which specifies a maximum quota.²

Under *exclusive dealing* (which can take the form of an exclusive supply or of an exclusive distribution agreement), one of the contracting parties agrees not to deal with its

² If demand is known and depends only on the final price, then quantity forcing amounts to a price ceiling and quantity rationing to a price floor – and quantity fixing is thus equivalent to resale price maintenance. This equivalence however vanishes if for example a retailer carries multiple brands.

partner's competitors. A variant consists of a "requirements contract" which requires for instance a franchisee to buy specific goods exclusively from the franchisor.

Tie-ins require the buying party to purchase additional goods. A particular type of tie-in consists of full-line forcing, which requires a distributor to carry the whole product range of a manufacturer.

Territorial or customer provisions limit the set of customers that a particular distributor may serve. Conversely, the manufacturer commits itself not to allow any other distributor to serve the customers in this territory, thereby protecting the distributor from intraband competition in the given territory.³ The territorial protection may be more or less strict. A weak form prevents for instance the distributor from competing actively for customers (e.g., through advertising) in other territories. Preventing "passive sales" as well provides a fuller protection – *de facto* granting a monopoly position for the manufacturer's products in the given territory.

This list of provisions is far from being exhaustive. Vertical agreements can also include clauses aiming at maintaining the reputation of the parties, specifying the services to be provided, and so forth. The next section reviews the motivations for the adoption of these provisions identified by the economics literature and their impact on competitors, consumers and social welfare.

2. The Chilean Competition Law

The Decree Law No. 211 of 1973, as revised on October 18, 2004, prohibits in its Article 3 any individual or collective "action, act or convention that impedes, restricts or hinders competition, or sets out to produce said effects". It further asserts:

"The following will be considered as, among others, actions, acts or conventions that impede, restrict or hinder competition or which set out to produce said effects:

³ "Territories" need not refer to geographical ones, but may as well refer to any kind of market segmentation – it may for example correspond to the "mail order" segment of the market.

a) Express or tacit agreements among competitors, or concerted practices between them, that confer them market power and consist of fixing sale or purchase prices or other marketing conditions, limit production, allow them to assign market zones or quotas, exclude competitors or affect the result of bidding processes.

b) The abusive exploitation on the part of an economic agent, or a group thereof, of a dominant position in the market, fixing sale or purchase prices, imposing on a sale another product, assigning market zones or quotas or imposing other similar abuses.

c) Predatory practices, or unfair competition, carried out with the purpose of reaching, maintaining or increasing a dominant position.”

Vertical restraints are by nature part of agreements between contracting parties; however, these parties are usually vertically related (a firm dealing with one of its suppliers, or with one of distributors), and thus need not be considered as competitors to each other. This suggests that paragraph b) above may be more relevant than paragraph a); thus, when reviewing the economics literature on vertical restraints, particular emphasis will be placed on anti-competitive effects that are attached to the exercise of a “dominant position”, interpreted in economic terms as “substantial market power” presented below. However, vertical restraints can also be used to gain or increase market power, and thus be subject to paragraph c); and more generally, they may “restrict or hinder competition” even when no single entity enjoys substantial market power (particularly when broadly used across the industry), and thus can be caught as such by the overall objective stated at the beginning of Article 3. I will thus also review the (pro- and) anticompetitive effects that have been identified even in the absence of substantial market power.

II. The Economic Role of Vertical Restraints

Vertical restraints can have many pro- as well as anti-competitive effects. Furthermore, several restraints may serve similar purposes in a given context (in which case banning one restraint is ineffective if the others remain available), and yet have different

effects in other contexts. In addition, the same restraint can have different effects competition and consumers when used for different purposes. For the sake of exposition, as well as for drawing relevant policy implications, it thus appears more effective to organize the discussion according to the *motivations* underlying the adoption of vertical restraints. That is, in what follows the analysis first identifies firms' purposes, by studying the effect of vertical restraints on their profits; for each such motivation, the impact of vertical restraints on consumers and social welfare is then discussed, in order to draw the relevant policy implications.

To organize this discussion further, it is convenient to focus first on motivations stemming solely from bilateral interaction, within a given vertical structure (vertical coordination), before turning to motivations driven by the interaction between rival vertical structure, in the short-term as well as in the long-term.

1. Vertical coordination

Much of the literature on vertical restraints focuses on coordination problems between a firm and its distributors, within a given vertical structure.⁴ Many decisions affect the joint profit of the vertical structure as a whole, among others retail prices, quantities sold to consumers, marketing efforts, locations or retail outlets. Neither party can directly control all these variables: some may for example be controlled upstream by a producer, whereas others may be monitored only by the distributors. In the absence of specific provisions, the party in charge of a decision may fail to internalize the impact of that decision on the other parties in the vertical structure; that is, as these decisions generate externalities on these other parties, failing to account for these externalities may prevent the vertical structure from maximizing the joint profit to be shared. Vertical restraints can then be used as means to enhance the coordination and achieve greater joint profits. Whether this benefits consumers, or society as a whole, may depend on the type of decision as well as on market specificities.

⁴ For the sake of exposition, the contributions then usually focus the case of a unique upstream firm, dealing with either one or several distributor. The insights would of course apply as well to situations where several vertical structures are competing, taking as given the attitude of rival structures, and neglecting strategic motives.

I will first focus on vertical price coordination problems, which give rise to the well-known double marginalization issue. Vertical restraints that help avoid such double-marginalization benefits consumers as well as the firms, and thus contribute to improve social welfare. I will then turn to non-price dimensions, such as product quality or advertising, where the policy implications tend to be less clear-cut; I will first illustrate some key insights in the context of the provision of retail services, before drawing the main policy implications from the literature on vertical coordination.

a. Double marginalization

▪ *The vertical price coordination problem*

Double marginalization has been first formally analyzed by Spengler (1950) and arises when two vertically related firms enjoy some market power. In such situations, each firm adds a mark-up to its costs, which results in a “double” mark-up and too high prices. The coordination problem comes from the fact that each firm, when setting its own price, does not take into account the effect of this price on the other firm’s profit. For instance, in the context of a manufacturer-retailer relationship, when considering an increase of the retail price the retailer trades-off the benefit of a higher margin against the cost of a reduced quantity, but ignores the adverse impact of that output reduction on the manufacturer’s profit. Such externality leads to a final price higher – and an output level lower– than what would maximize the joint profits of the manufacturer and the retailer.

▪ *Adequate vertical restraints can solve this coordination problem*

The most obvious solution consists in “dictating” the retail price through resale price maintenance, setting the wholesale price so as to achieve the desired sharing of the profits. As the issue is to prevent prices from being excessively high, a price ceiling actually suffices here; by contrast, price floors would be ineffective in solving double marginalization problems.

If retail prices are not verifiable (or too costly to verify), alternative solutions include minimal quotas on the quantities bought. This however requires demand to be known with sufficient accuracy.

Other non-linear tariffs, such as simple two-part tariffs (a wholesale price plus a franchise fee) can be as effective: the franchise fee can be used to distribute the profits between the producer and the distributor, eliminating the need to introduce a mark-up in the wholesale price which can be kept to the level of the marginal cost. Yet another solution consists in introducing a strong intrabrand competition among distributors, thereby eliminating the double marginalization problem through a reduction of the retail mark-up.

▪ *Impact on consumers and society*

Several vertical restraints (RPM or price ceilings, non-linear tariffs such as franchise fees or minimal quotas ...) thus allow firms to achieve a better efficiency, and this provides a motivation for firms' adopting these provisions. But what is good for the firms is also good here for consumers and society as a whole. Indeed, without these vertical restraints, the final prices charged by the vertical structure would be higher, which would obviously harm consumers and create or reinforce allocative distortions, thus reducing social welfare.⁵ That is, as double marginalization problems tend to inflate prices, any vertical restraint that solves this problem leads to lower prices, and thus benefits both firms and consumers – and thus increases total surplus. In other words, if avoiding double marginalization was the only motivation for the adoption of vertical restraints, the simple policy implication would be *laissez-faire*. As we will see, other effects have less positive, and sometimes unfortunately less clear-cut implications.⁶

Remark. In practice, vertical restraints may not allow firms to eradicate double marginalization problems entirely, and different restraints may moreover be more effective in different environments; in addition, each provision may affect other dimensions than the level of final prices. For example, two-part tariffs and resale price maintenance make very different

⁵ Efficient prices should reflect firms' (marginal) costs of producing and distributing goods and services. Raising prices above cost generates a profit at the expense of consumers, but also reduces output below the efficient level and results in a net loss of welfare. Further raising prices above cost exacerbates these so-called allocative distortions.

⁶ As noted above, price floors cannot solve double marginalization problems, as the issue is to prevent retail prices from being too high rather than too low; therefore, price floors could not benefit from this *laissez-faire* recommendation, as their adoption must respond to other motivations than solving double marginalization,

uses of retailers' possible better knowledge of local particularities of cost and demand conditions, and also involve different risk-sharing between the parties about variations in these local conditions. Setting an upper bound on the retail price, for example, will not allow the retailer to adjust its price to positive shocks on local cost conditions, and will furthermore let the retailer bear most of the risk associated with these shocks. In such situations, firms' interests may no longer be fully in line with that of consumers and society.⁷

b. Retail services

Distributors provide a range of services that foster the demand for manufacturers' products: these include pre-sale services such as the provision of information and advice to potential customers, on-the-spot services such as qualified salespersons, attractive show-rooms or convenient parking facilities, after-sale services such as free delivery or the provision of maintenance and guarantees.

These services generate *vertical externalities* between manufacturers and distributors: fostering consumer demand boosts the sales of the retailer that provides the service, but benefits as well the product manufacturer. These services can also generate *horizontal externalities* between distributors, as boosting the demand for a product can also benefit the other distributors of that product. Because of these externalities, a distributor may not obtain the full benefits of the services it provides, in which case the services are likely to be under-provided. I first discuss below purely vertical externalities, before turning to horizontal ones.

▪ *Vertical externalities*

In the absence of any specific provision, that is, if a manufacturer and a retailer rely on a simple wholesale price, when choosing the level of its effort a distributor considers its own profits, not aggregate profits. But as long as the manufacturer earns a positive margin, it gains from any sales increase resulting from higher retail efforts. By not taking into account this

⁷ See Rey and Tirole (1986) for a detailed analysis of these potential conflicts of interest, and Hansen and Motta (2012) and for a recent update.

increase in the manufacturer's profit, the retailer is likely not only to charge too high prices, but also to provide too little effort.⁸

Firms and consumers may however disagree here on the desirable amount of retail services: the reason is that firms are primarily interested in the additional consumers they can attract by providing these services; they thus focus on *marginal* consumers, and tend to neglect the impact on infra-marginal consumers. Thus, if for example marginal consumers are willing to pay more for better services, whereas infra-marginal consumers would favor lower services and prices, then the firms may choose to increase the level of services (and the retail price, so as to cover the cost) even though doing so hurts the majority of consumers and decreases total welfare. This divergence of interest between the firms and the consumers, first formally studied by Spence (1975), is likely to be important when the vertical structure enjoys a substantial market power. When it is the case, vertical restraints that allow the firms to achieve a better coordination in the choice of effort and price may overall decrease consumer surplus, and may even reduce social welfare if the divergence is strong enough. In contrast, in the case of strong interbrand competition among numerous manufacturers, so that consumers face many alternative offerings, increasing retail efforts and prices is unlikely to be harmful since most of the consumers that might be hurt could instead turn to alternate solutions. In that case, restraints used by the manufacturer and the distributor for the sole purpose of achieving a better coordination on retail prices and services are likely to benefit consumers as well, and thus, *a fortiori*, to increase total surplus. In other words, enhancing vertical coordination between manufacturers and retailers is likely to benefit consumers and society when markets are fragmented, but can have a more ambiguous impact when markets are concentrated.

- *Horizontal externalities*

Introducing intrabrand competition between distributors not only may no longer solve the vertical coordination problem on the level of effort (see below), but it may moreover

⁸ This intuition is only correct *ceteris paribus*. That is, the distributor is induced to charge too high a price, given the level of effort provided, and too little effort given the price being charged. Because of cross effects (charging a higher price may for example encourage the distributor to provide more effort), however, the comparison between the price and effort that would maximize joint profits, on the one hand, and those actually chosen by the distributor when facing a wholesale price above cost, on the other hand, is less clear.

introduce horizontal externalities. This arises whenever one retailer's effort benefits the others; this opens the scope for *free-riding*, and further raises the likelihood that the services in question will be under-provided: indeed the retailer will then not take into account the benefits to the others when choosing the level of its own efforts, and would rather have the others bear the cost of providing these services. Telser (1960) argues for instance that retail competition may prevent the provision of pre-sale information and advice to consumers who can then buy from rival retailers. A key factor there lies in the degree of appropriability of the retail efforts by the service provider, on the one hand, and by the rival distributors; on the other hand: giving pre-sale advice can for example give rise to free-rider problems, whereas increasing the number of cashiers is unlikely to benefit rival distributors.⁹

▪ *Which restraints can enhance coordination?*

In the absence of intrabrand competition, the vertical externalities already generate coordination problems on both prices and retail services. To solve this double coordination problem, the manufacturer can first choose to monitor the distributor's behavior, for example by setting a price ceiling and requiring a minimal level of effort. Alternatively, a two-part tariff remains effective: charging wholesale prices reflecting marginal costs makes as before the distributor the residual claimant of the joint profits of the vertical structure, and thus leads the distributor to choose both the efforts and the prices that maximize these joint profits. The franchise fee can then be adjusted so as to achieve the desired sharing of the profits.

By contrast, introducing intrabrand competition between distributors no longer solves the coordination problem, but instead changes its nature. This is particularly clear for those retail services that are subject to free-riding, as intrabrand competition is then likely to discourage the provision of these services. But this is also the case for services that are not subject to free-riding: the reason is that intrabrand competition induces retailers to follow more closely consumers' preferences about the desirable levels of retail services and effort, which as noted above may differ from those maximizing the joint profit of the vertical structure. Winter (1993) provides for example a detailed analysis for retail services that

⁹ See Mathewson-Winter (1984) for a formal analysis.

reduce consumers' shopping time.¹⁰ For the vertical structure as a whole, what matters is the impact of the services on consumers who are on the hesitating between buying or not; retailers, however, care also about consumers who are close to switch retailers. As those consumers tend to care less for the services,¹¹ intra-brand rivalry leads retailers to compete too much on price and too little on service, compared with what would maximize the joint profit of the vertical structure.

The manufacturer can however still achieve joint-profit maximization through vertical restraints, for example by directly monitoring both prices and levels of services, or by assigning exclusive territories, so as to eliminate intrabrand competition, and then using as above a two-part tariff so as to make retailers the residual claimants of the joint profits in their respective territories.

Compared with this joint-profit outcome, the situation that would prevail in the absence of vertical restraints may be better or worse for consumers and society (see Scherer (1983), Comanor (1985) and Caillaud-Rey (1987)): although intrabrand competition leads distributors to follow closely consumers' preferences, it also induces a reaction from the manufacturer, who sets the wholesale price so as to maximize its own profits; this indirect effect on intrabrand competition on the wholesale price may more than offset the benefits from distributors' better care for consumer preferences.

▪ *Policy discussion*

Vertical restraints thus also allow the manufacturer and the distributor(s) to internalize vertical externalities, so as to enhance coordination over the provision of retail services. However, and in contrast with the case of pure double marginalization, solving such vertical coordination problems is not necessarily socially desirable, particularly in concentrated markets where the vertical structure enjoys a substantial market power, as the divergence between the marginal consumers' and the infra-marginal consumers' willingness to pay for

¹⁰ Marvel and McCafferty (1984) and Klein and Murphy (1988) provide other illustrations.

¹¹ As Winter nicely puts it (p. 63): "consumers on interretailer margins [i.e., consumers who are hesitating between patronizing one retailer or the other] are a long distance away from the nearest retailer, and therefore, of these consumers, the one with high time costs are not going to buy the product. The low-time-cost consumers have a low demand for service (since service just reduces the purchase time)."

services may then be important. By contrast, in fragmented markets where vivid interbrand competition gives consumers the choice between many alternatives, enhancing vertical coordination over both price and non-price dimensions is likely to benefit consumers as well as firms, and thus enhance social welfare.¹²

Vertical restraints can also be used to internalize horizontal externalities among retailers; this is the case for example for those services, such as the provision of pre-sale advice, that are subject to free-riding; in the absence of vertical restraints, these services are likely to be underprovided, as the cost of such service would be fully borne by retailer that provides it, but the benefits would in great part accrue to the rival retailers. Thus, in such situations, intrabrand competition among distributors is likely to generate too little retail effort, not only from the firms' point of view, but also from the consumers' point of view; hence in such situations vertical restraints are more likely to be both privately and socially desirable.

c. Other coordination problems

▪ *Product mix*

Distributors (wholesalers or retailers) often carry several brands; hence, if the upstream price for one brand exceeds its (marginal) cost of production, distributors will be induced to favor the sales of another product, which introduces a distortion in the mix of products and reduces the total profit of the vertical structure. A similar issue arises when an intermediate good can be used in variable proportions in order to produce final goods: raising the price of the intermediate good above its cost can trigger inefficient input substitution.¹³

In both instances, the distortion can be eliminated by relying on two-part tariffs (with wholesale prices reflecting marginal costs) or royalties (based on the total sales of all products). In the first case, exclusive dealing arrangements can also provide a solution. In the

¹² In his analysis of services reducing consumer shopping time, Winter (1993) finds for example that, the adoption of vertical restraints by a monopolistic manufacturer results in excessive provision of service and reduces total welfare; Winter however emphasizes that vertical restraints would likely be socially desirable if the manufacturer were facing competition.

¹³ See e.g. Vernon and Graham (1971), Schmalensee (1973) and Warren-Boulton (1974).

latter case, as noted by Blair and Kaserman (1978) that tie-ins can also be used to prevent inefficient input substitution. This applies for instance to durable goods and aftermarkets such as spare parts and maintenance services: if these markets are more competitive than the manufacturing of the original equipment, as is often the case due to lower fixed costs and scale economies in the aftermarkets, then consumers may be induced to rely excessively on maintenance and renew their equipment less often than socially desirable. Tying the maintenance services to the sale of the equipment can eliminate this distortion.¹⁴

- *Upstream decisions*

Although the analysis focused so far on the impact of downstream decisions on the profitability of vertical structures, manufacturers' upstream decisions, such as nation-wide advertising campaigns or product quality, also affect the profit of their distributors and, *in fine*, the well-being of consumers. There again, a simple linear wholesale price is likely to generate vertical externalities and fail to achieve joint-profit maximization, whereas vertical restraints such as royalties, bundling and exclusive dealing, which allow manufacturers to be more sensitive to retailers' profits, can correct for these externalities and achieve (or get closer to) joint-profit maximization.

- *Risk-sharing*

As we have seen, coordination problems on downstream decisions can be solved through the use of two-part tariffs, which in effect make the distributors the residual claimants. This solution however also transfers all risks to the downstream parties, which may not be desirable if they are risk-averse. In that case, firms may have to trade-off joint-profit maximization against efficient risk-sharing: starting from wholesale prices equal to marginal costs, an increase in the wholesale prices (together with a reduction of the franchise fees) generally induces downstream firms to depart from joint-profit maximization, but at the same time (at least partially) insures them against the risks attached to these joint profits. Other ways of sharing the profit, such as royalty schemes and contingent covenants, can also be used to enhance risk-sharing.

¹⁴ See Tirole (1988, p. 181) for a formal analysis.

▪ *Hold-up*

Lastly, distributors must sometimes make specific investments, particularly in the case of selective distribution, exclusive distribution or franchise systems. These investments often have little residual value if the relationship is terminated. In that case, the return on such investments must be guaranteed through some long-term commitment: in the absence of sufficient commitment, the fear of opportunistic behavior would likely lead to underinvestment (see Williamson (1985) and (1989)). Similarly, manufacturers' incentives to invest in product quality and reliability are likely to be insufficient if distributors can "divert" some of the attached rents. Various provisions can again be used to prevent such opportunistic behavior from one or the other party: exclusive territories can for example be granted to protect distributors' investments, while non-competition or exclusive dealing provisions can be used to protect a manufacturer's image and reputation; see for instance Besanko and Perry (1993).¹⁵

▪ *Policy implications*

The overall conclusion from the literature on vertical coordination remains similar to the one for retail services:

- A simple wholesale price often fails to induce good coordination between upstream and downstream decisions, and thus does not achieve joint-profit maximization.

- Vertical restraints can solve these coordination problem, or at least to get closer to joint-profit maximization.

- The adoption of these vertical restraints benefits the firms and raises their joint profits. It may also benefit consumers and thus increase total welfare, although it does not always do so. In fragmented markets with strong interbrand competition, vertical restraints that increase joint profits by enhancing vertical coordination are likely to increase consumer surplus and even more likely to enhance total welfare. By contrast, in concentrated markets

¹⁵ Long-term contracts may not suffice to induce efficient levels of investment, particularly when it is difficult to forecast all future contingencies or costly to write a fully contingent contract. For an analysis of these issues and of potential underinvestment effects, see Grout (1984), Rogerson (1984), Hart and Moore (1988) and Aghion, Dewatripont and Rey (1994).

dominated by vertical structures with substantial market power, the welfare analysis is more ambiguous: enhancing vertical coordination is then good for the firms but is not necessarily good for consumers or society; a case-by-case study (assessing for instance the scope for free-riding) would be needed to conclude. As we will see, other uses of vertical restraints have however less ambiguous impact, and may therefore be more relevant for policy purposes.

2. Impact on competition in the short-term

In the short-term, that is, keeping the market structure constant, vertical restraints can impede competition in various ways: they can be used to maintain collusion either upstream (*facilitating practices*) or downstream (*sham cartels*), weaken interbrand competition when it is already imperfect (*competition dampening*), and allow firms with significant market power to exploit it more fully (by solving *commitment problems*); vertical restraints can also be used to foster the role of downstream firms in coordinating upstream rivals (*common agency*) and to avoid competition among these common agents when competing upstream firms rely on the same competing downstream firms to distribute their products (*interlocking relationships*). I consider these aspects in turn below.

a. Collusion

▪ *Downstream collusion: Sham vertical agreements*

Since vertical restraints such as Resale Price Maintenance or the assignment of exclusive territories eliminate or at least reduce downstream competition, wherever horizontal cartels are illegal, downstream firms may use such vertical restraints to circumvent the law and maintain a cartel through “sham vertical agreements” with a pseudo upstream partner. This is an obvious misuse of vertical restraints, which enhances profits at the expense of

consumers and social welfare.¹⁶ Similar concerns arise when rivals adopt cross-licensing agreements to alleviate price competition.¹⁷ In the same vein, retailers can use their relationship with a common supplier to exchange information and facilitate collusion in this way.¹⁸

- *Upstream collusion: Facilitating practices*

Courts have often argued that vertical price restraints can facilitate collusion among producers.¹⁹ They can for example foster coordination, e.g. by identifying desirable price or market share targets. Inflated catalogue prices (together with upfront fees or rebate schemes), and other practices simplifying the price structure, such as category pricing, have for instance been argued to facilitate collusion in this way.²⁰

Vertical restraints can also help firms sustain collusion, e.g. by making the market more transparent, so as to deter deviations more easily. This argument was informally used by Telser (1960) and later on by Mathewson and Winter (1998), who argued that RPM could play an even bigger role when retailing costs changed over time: “If wholesale prices are not easily observed by each cartel member, cartel stability would suffer because members would have difficulty distinguishing changes in retail prices that were caused by cost changes from cheating the cartel. RPM can enhance cartel stability by eliminating retail price variation.”

¹⁶ In Switzerland, at a time where this was legal bookstores used to operate a cartel, monitored by the cartel office; when the office increased pressures on prices, the bookstores dropped the cartel arrangement, and adopted instead a single intermediary to handle all trade between German publishers and Swiss bookstores – with RPM as part of their contracts.

¹⁷ See e.g. EC (2004).

¹⁸ In the UK, this practice of coordinating behaviour via a common supplier has become known as “A to B to C” coordination. See the discussion of *Argos Ltd & Anor v OFT 2006* in Bennet *et al.* (2011).

¹⁹ See for example *Continental T.V. Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977) and *Business Electronics Corp. v. Sharp Electronics*, 485 U.S. 717 (1988), in which the U.S. Supreme Court found that “there was support for the proposition that vertical price restraints reduce intra-brand competition because they facilitate cartelization.”

²⁰ This issue was for example intensely discussed in media mergers such as *Sony – BMG*; see the decision of the European Commission Decision No COMP/M.3333 of 3 October 2007.

Jullien and Rey (2007) formally study this line of argument and show indeed that, by allowing for more uniform retail prices, RPM facilitates collusion by making price cuts easier to detect. In the absence of RPM, retail prices are driven by wholesale prices but also by local shocks on retailing costs or demand conditions. Therefore, observing the retail prices does not allow the producers to perfectly infer the underlying wholesale prices; as a result, deviations from a collusive agreement cannot be easily identified. Instead, because RPM leads to uniform retail prices, it allows producers to detect deviations at once and therefore makes collusion easier to sustain.

As it prevents distributors from adapting to local demand and cost conditions, price uniformity is not efficient; producers thus have to trade-off this inefficiency against the benefits of collusion. Jullien and Rey (2007) show that the additional profit generated by the collusive agreement can however offset the loss of profit due to price rigidity, and this harms consumers and total welfare when price rigidity is socially inefficient, as for instance in the case of shocks on retail costs.²¹

b. Competition-dampening

▪ *Softening inter-brand competition through strategic delegation*

Vertical restraints can also affect the strategic interaction between rival vertical structures: by altering the behavior of distributors in downstream markets, they also influence the behavior of rival producers when they negotiate with their own distributors. A producer can then take advantage of this to credibly commit not to behave aggressively vis-à-vis its rivals, so as to encourage them to raise their prices or reduce their output.

Bonanno and Vickers (1988) explore the idea, formulated earlier by Vickers (1985), that producers may prefer delegating the distribution of their products to independent retailers. In a similar setting, Rey and Stiglitz (1988, 1995) show that vertical restraints such as exclusive territories, which eliminate intra-brand competition within a vertical structure, can

²¹ When instead local shocks only affect the demand side, the impact of RPM is potentially more ambiguous since it leads to prices that are higher (on average) but that do not react to demand fluctuations (which, as such, is then socially desirable); RPM however still reduces consumer surplus and total welfare when the scope for collusion is sufficiently important.

also help reduce inter-brand competition.²² In both instances, by delegating pricing decisions to independent retailers, or by giving them more freedom in their pricing decisions by reducing intrabrand competition, producers transform direct, head-to-head interbrand competition into an indirect and less intense form of competition.

Indeed, if producers maintain a high degree of intra-brand competition, then the retail price of a product will closely reflect the wholesale price of that product. Thus, the situation will be similar to direct marketing, in which producers directly compete in prices against each other. If instead producers delegate retail pricing decisions to independent distributors, and moreover limit intrabrand competition by granting them exclusive territories, then when setting the retail prices for a product the distributors will not only take into account the wholesale price for that product, but will also respond to changes in the retail prices of rival products; they will therefore indirectly react to changes in the wholesale prices for these products: typically, if rival producers increase their wholesale prices, rival retailers will follow suit and increase their retail prices, leading the retailers of the first product to react by increasing their own prices. In essence, by delegating pricing decisions to independent distributors, and granting them local market power, a producer can pre-commit itself to respond positively to increases in rivals' wholesale prices, which in turn encourages these rivals to set higher prices.²³

In the same vein, Elhauge (2009) shows that “loyalty discounts” guaranteeing a discount to “loyal” buyers, compared with the price charged to “free” buyers, allows manufacturers to commit not to compete aggressively for free buyers and result into higher prices for all (free and loyal) buyers.²⁴ The intuition is as follows. Once it has secured loyal customers, a manufacturer faces a choice when setting its catalogue price: either pricing aggressively in order to compete for free buyers, or giving up on these free buyers and focusing instead on its loyal buyers. The first option requires granting the discount to the loyal

²² This argument has been empirically tested by Slade (1998) using a change of regulation in the UK beer industry.

²³ Related ideas have been developed in the marketing literature; see for example McGuire and Staelin (1983). Other papers such as Gal-Or (1991) have enriched the delegation model; see Caillaud and Rey (1995) and Irmen (1998) for reviews of this literature.

²⁴ These insights are further explored by Elhauge and Wickelgren (2011).

buyers, whereas in the latter case the manufacturer can avoid this by inflating its catalogue price. As a result, the latter option dominates, even if rivals' prices are above cost, as long as these prices are not excessively high (otherwise, the manufacturer will rather undercut them and attract free buyers); this, in turn, encourages rivals to charge supra-competitive prices, as they anticipate that the manufacturer will exploit its loyal buyers rather than fighting for free buyers. As a result, free buyers benefit less from rivals' competitive pressure than would otherwise, absent the loyalty discount scheme.

▪ *Key factors*

Not all vertical restraints may generate such competition-dampening effects. The key idea is to commit oneself not to compete aggressively against its rivals, by *delegating* some decision power to distributors; in the above example, granting exclusive territories gives some freedom to the distributors in their choice of retail prices, freedom that is non-existent if intra-brand competition is fierce. Therefore vertical restraints that increase the direct control of producers over their distributors, such as RPM for instance, could not serve that purpose.

The ability for the producers to use vertical contracts to pre-commit themselves depends also on which contractual terms can be observed by rivals. Granting exclusive territories is quite effective in this respect, as it is easily observable by rivals and is not easily renegotiated. Exclusive territories are also likely to have better commitment power than, say, non-linear contracts: producers are more likely to observe whether rivals have assigned exclusive territories to their distributors, than the precise terms of their tariffs.²⁵ Another issue is to identify the set of admissible contracts: as shown by Katz (1991), in the absence of any restriction, firms could easily achieve the fully collusive outcome.

Finally, note that the key ideas presented here do not rely on producers having the bargaining power. Shaffer (1991) shows for example that competitive suppliers would similarly offer wholesale prices above the marginal cost of production to the distributors (together with slotting fees, so as to give back most of the rents to the distributors – alternatively, distributors could be compensated through lower prices for the first units), in order to soften competition and maintain high prices on the retail market.

²⁵ Caillaud, Jullien and Picard (1995) analyze the commitment power of unobservable contracts in the presence of asymmetric information.

- *Policy implications*

These *competition-dampening* effects rely critically on strategic delegation: firms design the terms of their vertical contracts so as to commit themselves to being less aggressive vis-à-vis their rivals, in order to encourage their rivals to be less aggressive themselves. The vertical restraints that can serve that purpose are therefore those that tend to give distributors more flexibility in their pricing decisions: exclusive territories, selective distribution, and so forth.

Obviously, by attenuating the intensity of interbrand competition, vertical restraints that are used in this way enhance profits at the expense of consumers and social welfare.

c. Commitment problems

- *Restoring the exercise of market power*

A firm with significant market power may find it difficult to exert this market power when downstream competition “percolates” upwards. This is particularly likely to be the case when the firm lacks the *commitment* power to limit downstream competition. To see this, consider for example a franchisor²⁶ that must decide how many franchisees to license in a given local market. When negotiating with the potential franchisee, it would have an incentive to promise to limit the number of additional franchisees, so as to maximize the profit generated by the franchisee and thus the price that the franchisee will be willing to pay for the license. However, once it has issued this first license, the franchisor has an incentive to grant additional licenses (even at lower prices, to account for the presence of the first franchisee); but then anticipating this, the first licensee will not be willing to pay the “full” price for the license. That is, the franchisor’s inability to commit itself not to flood the market with additional licenses undermines the value of the franchise and prevents the franchisor from fully exerting its market power.

Although the above illustrations concern “discrete” decisions such as the number of the franchisees, or the number of licenses, the same argument applies to “continuous” decisions such as output levels. Indeed, a producer supplying competing distributors has an

²⁶ A similar issue arises for patent licenses.

interest to restrict its supply so as to maintain high prices and profits, which it can then share with the distributors. However, when dealing with one of the distributors, the producer has an incentive to cheat on the other downstream competitors, by supplying an additional quantity. As first shown by Hart and Tirole (1990), such opportunism may prevent the producer from fully exerting its market power.²⁷ Suppose for example that a monopolist producer sells its product through two competing distributors. The producer could sell half of the monopoly quantity to each distributor for a fee equal to half of the monopoly profit, and if these offers were publicly observable they would be accepted by the retailers. However, if the producer can secretly renegotiate with one of the distributors, it would be willing to increase the quantity sold to that distributor against a larger fee: this would be mutually profitable, although it would reduce the other distributor's profit. However, anticipating such opportunistic behavior, the second distributor will no longer accept the initial offer, and will instead insist in reducing the fee. As a result, the only sustainable outcomes are competitive ones.²⁸

A similar commitment problem arises when the producer contracts sequentially with competing distributors: it then has an incentive to free-ride on early signing distributors when negotiating later deals.

²⁷ Formally speaking, this effect could be interpreted as a coordination problem between the manufacturer and its retailers. I chose to present it in this section, however, as it can have an impact on the market structure (e.g. through the exclusion of some downstream firms or through vertical integration).

²⁸ Hart and Tirole (1990) made this point in the context of Cournot competition (in quantities) downstream, whereas O'Brien and Shaffer (1992) made it in the context of Bertrand competition (in prices). The exact outcome depends on the type of beliefs formed by the distributors; see McAfee and Schwartz (1994) and Rey and Vergé (2004). Martin, Normann and Snyder (2001) have experimented alternative contracting situations between a monopolist supplier and competing distributors. They observe that the monopolist was able to maintain output close to the monopoly level significantly less often when making secret offers.

▪ *Policy implications*

Whenever these commitment problems arise, downstream competition “percolates” upstream and prevent upstream suppliers from fully exerting their market power; this results into lower input prices, and eventually into lower retail prices as well, to the benefit of consumers and society. To be sure, suppliers have an incentive to limit the scope for such opportunism, e.g., by building a reputation not to renegotiate contracting terms with downstream customers; the seriousness of these commitment problems thus depends on factors such as market transparency or the frequency of negotiations; in transparent markets, in which the terms of vertical arrangements are readily observed by all downstream competitors, or in case of frequent interaction, which allows for reputation building, suppliers can more easily overcome the risk of opportunism; by contrast, in less transparent markets, in which for example (private) negotiations take place on an annual basis, these commitment problems may be more serious, and contribute to limit prices.

In such markets, upstream suppliers have an incentive to reduce downstream competition: Hart and Tirole (1990) show that this can be achieved for example through exclusive dealing or vertical integration, whereas O’Brien and Shaffer (1992) show that it can be achieved via an industry-wide price floor or even via bilateral price ceilings; Montez (2012) shows that return policies (buybacks provisions specifying a price paid by the producer to the retailer for each unit of unsold stock) can also eliminate the problem.²⁹

Obviously, vertical restraints that restore the ability of the vertical structure to maintain high prices not only harm the consumers but also reduce total economic welfare.

d. Common agency and interlocking relationships

Additional issues arise when producers distribute their products through the same distribution channels, as is the case for most consumer goods. The main concern is that rival producers can use the distributors as “common agents” to eliminate interbrand competition.

²⁹ Non-discrimination rules and “most-favored customer” clauses can also limit opportunism; see DeGraba and Postlewaite (1992), McAfee and Schwartz (1994) and Marx and Shaffer (2002, 2004).

- *Common agency*

Bernheim and Whinston (1985, 1986) show that if competing producers decide to sell their goods via the same distributor, this leads to joint-profit maximizing prices. Their insight applies for a fairly large set of common agency situations, as long as the distributor enjoys a monopoly position on some (local) market and non-linear tariffs (e.g., two-part tariffs) can be used – otherwise, double marginalization would prevent joint-profit maximization.

The intuition is fairly simple: by setting wholesale prices that reflect their production cost, the producers make the distributor a residual claimant for the profit generated, which induces the distributor to charge industry-wide monopoly prices. The producers can then recover the profits through the fixed fees.³⁰

- *Interlocking relationships*

In practice there is often competition both upstream and downstream: each distributor also deals with several producers, but each producer also deals with several distributors. In other words, distributors do act as common agents for rival producers, but contrary to the above situations, these common agents also compete against each other. The extent to which they can still be used to avoid or attenuate interbrand rivalry is then less clear; vertical restraints may however foster this role.

Dobson and Waterson (2007) were the first to formally study a bilateral duopoly with such interlocking relationships. They restrict attention to wholesale agreements taking the form of linear tariffs, which creates scope for double marginalization, but allow for variations in the relative bargaining power of manufacturers and retailers. Double-marginalization problems are more severe when producers have more bargaining power, in which case RPM can be socially preferable. When instead retailers have substantial bargaining power, double marginalization is less of an issue, and RPM tends instead to harm consumers and reduce total welfare.

In a similar context of interlocking relationships, but allowing for two-part tariffs, Rey and Vergé (2010) first show that, in the absence of any additional restraint, downstream

³⁰ There are multiple equilibria but they only differ in the way the profit is shared between the different parties.

competition among the common retailers generates “competitive” prices that are indeed below the industry-wide monopoly level. This is not entirely obvious, as through the fees they charge to their common retailers, manufacturers internalize all downstream margins, including those earned on their rivals’ products. This tends to limit their incentive to price aggressively. However, manufacturers still fail to internalize the impact of their pricing decisions on rivals’ upstream margins, which in turn gives them an incentive to price below the level that would maximize total industry profit. Indeed, sustaining retail prices at the monopoly level despite retail competition would require wholesale prices above cost, and thus positive upstream margins; but this in turn, gives manufacturers an incentive to price below the monopoly level, as they do not internalize the impact on the price cut on the upstream margins of their rivals. Conversely, in order to use the retailers as “common agents” and coordinate in this way their pricing decisions, the manufacturers should squeeze their upstream margins, but then downstream competition would drive final prices to a competitive level.

This already shows that the presence of interlocking relationship has a deep impact on the working of competition. But it also emphasizes the key role of *downstream* competition in fostering *upstream* competition: indeed, absent downstream competition, manufacturers could use their common distributors so as to coordinate their pricing decisions. It follows that manufacturers have an incentive to limit downstream competition among retailers, so as to restore their roles as “common agents” and avoid upstream competition among rival brands.

Rey and Vergé show for example that RPM (even as part of purely bilateral, vertical contracts) can be used to maintain retail prices at the monopoly level, thus eliminating *interbrand* competition as well as *intra-brand* competition.

To see this, suppose first that, through fixed fees, manufacturers can appropriate all retail profits (this may be a relevant assumption in the absence of retail bottlenecks, that is, when many potential retailers can distribute the manufacturers’ goods in any given location). Manufacturers can now use the retailers as common agents to coordinate their pricing decisions, by charging wholesale prices reflecting their actual costs, and at the same time rely on RPM in order to maintain retail prices at the monopoly level. The intuition is as follows. Consider the pricing decision of a given manufacturer M , and suppose that all the others (i) charge wholesale prices reflecting their costs, and (ii) use RPM to maintain the retail prices of their products at the monopoly level. When setting the retail price for its products,

manufacturer M takes into account the impact of these prices on the upstream margin it earns on the sales of its products and, through the fixed fees charged to the retailers, it also internalizes the impact of these prices on the margins that the retailers earn on all products sold (not only its own products, but also rival ones). It therefore internalizes the impact on the total margins generated by the sales of its products (it directly internalizes the impact on upstream margins, and internalizes the impact on downstream margins through the fixed fees), as well as on the retail margins generated by rivals' products. But if rivals' wholesale prices reflect their actual costs, then retailers' margins on rival products coincide with the total margins generated by these products. As a result, manufacturer M is led to internalize the full impact on its prices on total industry profit; if in addition the other products are sold at monopoly prices, it then has an incentive to maintain as well its prices at the monopoly level, and can do so through RPM.

This reasoning shows that RPM can eliminate *all* competition, both upstream and downstream: eliminating intrabrand competition among the retailers allows the manufacturers to use them as “common agents” to alleviate interbrand competition. The exact outcome however depends on the relative bargaining of the manufacturers and the retailers. If for example retailers constitute bottlenecks on some local markets, their bargaining power allows them to obtain a share of the industry profit, and Rey and Vergé show that this share actually increases as retail prices and total profit increase; as a result, manufacturers may favor retail prices lower than the monopoly level (together with wholesale prices above cost), so as to reduce retailers' rents.

- *Policy implications*

This strand of literature suggests that, when rival producers rely on the same intermediaries for the distribution of their products (situation of “interlocking relationships”), vertical restraints that attenuate or even eliminate “intrabrand” competition among these intermediaries may restore their role as “common agents”, and weaken or eliminate interbrand competition as well: although the literature has so far focused on the use of RPM, other restraints such as exclusive territories would also eliminate intrabrand competition, and thus allow manufacturers to use the retailers as “common agents”, as in Bernheim and Whinston.

Obviously, by attenuating or even eliminating interbrand competition, such use of vertical restraints would harm consumers and reduce social welfare.

3. Impact on competition in the long-term

From a longer term perspective, and thus accounting for investment and entry/exit decisions, vertical restraints can foster potential competitors' incentives to enter a market (pro-competitive effects), and can also be used by incumbent to raise entry barriers (market foreclosure).

a. Entry stimulation

The above discussion shows that vertical restraints can increase the joint profits of upstream and downstream firms, either by enhancing vertical coordination – in which case they may also benefit consumers – or by attenuating or even eliminating interbrand as well as intrabrand competition – in which case they increase profits but, in the short-run, reduce consumer surplus and total welfare. These positive effects of vertical restraints on profits imply that, in a longer-term perspective, potential entrants can anticipate larger profits and thus have higher incentives to enter a market. That is, the same products that may not be profitable in the absence of vertical restraints may well become profitable if vertical restraints are allowed. For instance, a manufacturer may convince a distributor to launch a new product by granting it an exclusive dealing right.³¹

Hence, vertical restraints can favor entry (both at the upstream and the downstream levels) and, by the same token, promote economic efficiency. These beneficial effects are likely to be particularly important if, in the absence of vertical restraints, free-rider problems and the fear of other kinds of opportunistic behavior would excessively limit the incentives

³¹ Similarly, the prospect of dampened competition may foster entry. Note however that the economics literature on entry and product variety stresses also the risk of *excessive* entry (brand proliferation) –for conditions under which there can be excessive or insufficient entry, see for example Lancaster (1975), Spence (1976), Dixit and Stiglitz (1977), Vickrey (1964), Salop (1979), and Mankiw and Whinston (1986) for the case of monopolistic or spatial competition, and Katz (1980) for the case of a multiproduct monopolist; Tirole (1988, chapter 7) offers a good overview of this literature. More recently, Chen and Riordan (2007) show that the market may again provide too many or too few products in a spokes model of nonlocalized spatial competition, and Rey and Salant (2012) show that similar issues arise when deciding on the number of licenses – the analysis focuses on patenting, but the insights would apply as well to retail (e.g., franchise) networks.

for specific investments (to some extent, the entry decision can itself be assimilated to a “specific” investment). Also, vertical restraints may be particularly useful to a firm who, being already established in one country, wishes to expand and enter the market in other countries.

Note that these long-run beneficial effects exist, whether the expected increase in profits comes from enhanced vertical coordination and better efficiency, or from the prospect of weakened competition. If vertical restraints are primarily efficiency-enhancing, then both short-run and long-run effects are positive for economic welfare. In contrast, if vertical restraints are mainly used to reduce interbrand competition in the short run, then their overall appreciation must trade-off these undesirable short-run (or *ex post*) effects with the beneficial effects that they may have in the long run (or *ex ante*). Whether the former or the latter effects dominate is then an empirical question and depends *inter alia* on the likely importance of the two types of effects (e.g., are there significant investment incentives problems?) as well as on factors such as the relative weight placed on the future and the uncertainty attached to it.

b. Vertical foreclosure

Vertical restraints can also be used to foreclose market access and prevent the entry of potentially more efficient competitors. If for example there is a limited supply of efficient distributors, or a scarcity of good retail locations, then an incumbent supplier can raise entry barriers for potential rivals by signing-up the best distributors or locations into long-term exclusive dealing arrangements. More generally, locking-in available distributors into exclusive dealing arrangements, thereby forcing potential new suppliers to set-up their own distribution systems, would raise rivals’ entry costs whenever there are significant economies of scope or scale in distribution.

- *Raising rivals’ costs*

These strategies are part of “raising rivals’ costs strategies” which have been informally explored in the U.S. institutional context by Krattenmaker and Salop (1986). Such strategies can be used against actual competitors, to reduce their market shares or even force them out of the market, as well as against potential ones, to prevent them from entering the market or delay their entry.

The so-called Chicago critique contested this raising rivals' costs approach by pointing out that exclusive agreements hurt distributors (who may prefer to carry both lines of products, and may also benefit from increased supply competition in case of entry). Posner (1976) and Bork (1978) stressed for instance that, to accept an exclusive dealing agreement, a distributor should be compensated for the lost profits that they could have derived from dealing with more efficient supplier; they argue that entry deterrence strategies cannot be profitable for the incumbents once the need to compensate distributors is accounted for, as more efficient suppliers would generate greater total profit.

▪ *Exclusionary clauses as a rent-extraction device*³²

Aghion and Bolton (1987) responded to the Chicago School critique³³ by stressing that incumbents could still use vertical restraints such as “penalties for breach” or “options to buy” in order to extract some of the entrants' comparative advantages.

Suppose for example that the entrant is more efficient than the incumbent supplier, and that this greater efficiency generates an additional gain G in the profit generated by a given customer. By imposing a penalty for breach P , the incumbent will force the entrant, in order to win the competition for the customer, to compensate the customer for this penalty; that is, in effect it is the entrant that will have to pay the penalty P . By agreeing on a penalty (almost) equal to G , the incumbent then force the entrant to give up (most of) its comparative advantage, and recover it through the payment of the penalty. To illustrate this, consider the following situation: (i) an incumbent monopolist, M , faces a customer, C , who is willing to buy one unit, which costs c to produce; (ii) a potential entrant E can enter with a lower cost $c_E \leq c$. In case of entry, competition drives the price down to c , and E earns its efficiency gain $G = c - c_E$. To prevent entry, M could try to lock-in C into an exclusive contract. But

³² This and the following discussion borrow from Rey and Tirole (2007), section 4.

³³ A first formal analysis of raising rivals' costs strategies was proposed by Comanor and Frech (1985) and developed by Mathewson and Winter (1987) and Schwartz (1987), who recognized the role of incumbent producers' competition for distributors. They however relied on restricted class of arrangements (namely, linear tariffs); allowing for non-linear tariffs, Bernheim and Whinston (1998) show that the foreclosure of an efficient rival is never possible in the absence of any other agency problem (i.e., as long as two-part tariffs, say, allow for perfect vertical coordination).

anticipating that it will then no longer benefit from competition, C will not accept a price p higher than the “competitive” level (that is, $p = c$), making such exclusive deal unprofitable for M . Introducing instead a penalty for breach $P = c - c_E$, together with a competitive price $p = c$, allows instead M to extract the entrant’s cost advantage. To attract C , E must then offer a price p such that $p_E + P \leq p = c$, or $p_E \leq c - P = c_E$: that is, the penalty for breach P forces E to give away (almost) all of its efficiency gain by reducing the price offered to C ; and through the penalty for breach $G = c - c_E$, M recovers back the additional surplus so generated. Alternatively, the incumbent could achieve the same effect by giving the customer an “option to buy” at a discounted price c_E , in exchange for a down payment $F = c - c_E$. This forces again E to “match” the reduced price c_E , and through the down payment M reaps again the entrant’s efficiency gain.

In this example, the incumbent perfectly knows the magnitude of the entrant’s efficiency gain, and can fine tune the penalty for breach so as to extract the entire efficiency gain; as a result, entry occurs whenever it is efficient.³⁴ In practice, however, there may be some uncertainty about the entrant’s comparative advantage; Aghion and Bolton show that the incumbent can still extract some of the entrant’s efficiency gain when it is large enough, at the risk of foreclosing entry if the entrant is not sufficiently efficient.³⁵

³⁴ The penalty for breach may however discourage the entrant from investing in the new technology. More generally, exclusivity contracts in which customers commit to purchase from an upstream supplier can deter investments by competing upstream suppliers; Stefanadis (1997) shows for example that upstream firms may lock customers into exclusive contracts in order to reduce their rival’s R&D expenditures in subsequent innovation markets.

³⁵ As preventing entry is inefficient, the incumbent and the customer may want to renegotiate their contract at this stage (that is, the supplier may forgive some of the penalty for breach). This point is recognized by Spier and Whinston (1995), who however emphasize that the incumbent may still have an incentive to block entry by over-investing in improving its own technology, in order to force the entrant to concede a better deal. Spiegel (1994) shows however that liquidation damages may however enhance welfare (even if ex post entry deterrence is excessive) when the incumbent supplier can invest in order to decrease its marginal cost prior to negotiating with the distributor.

▪ *Buyers' miscoordination*

Aghion and Bolton (1987) also point out that the incumbent supplier can play customers against each other in order to deter the entry of a more efficient competitor. Although Aghion and Bolton's original analysis relies on contracts that are conditional on how many customers accept exclusivity, Rasmusen et al. (1991) and Segal and Whinston (2000) have shown that their insight is robust in the presence of scale economies.³⁶

To see this, suppose for example that there are n customers and that entry is viable only if the entrant can sign-up more than $n - m$ customers; the incumbent can therefore block entry by "bribing" a targeted group of m customers into exclusive arrangements, by sharing the rents it gets from exploiting its monopoly power vis-à-vis the remaining $n - m$ customers. This strategy is clearly successful when the monopoly rents exceed the benefits that the targeted customers can hope to derive together from free entry.

Even if this condition does not hold, however, the incumbent can still successfully deter entry by "playing customers against each other," that is, by relying on poor coordination among the customers: while customers may be better off if all reject exclusivity, they may fail to coordinate and accept exclusivity if they anticipate that the others will do – the incumbent may then not even need to bribe any customer.

Segal and Whinston (2000) stress that the incumbent's ability to discriminate among customers enhances the scope for successful exclusion. Without discrimination, the incumbent would fail to deter the entry of an equally efficient competitor if customers coordinate – even only tacitly – on their favored equilibrium. By contrast, with discriminatory offers the above-mentioned scheme may succeed even if customers can explicitly coordinate their buying decisions.³⁷

Fumagalli and Motta (2006) stress instead that such strategies are more difficult to implement when buyers are competing against each other, as in the case of downstream

³⁶ Rasmusen et al. (1991) meant to focus on nondiscriminatory contracts but actually assume some form of discrimination. Segal and Whinston (2000) clarify this issue as well as the respective role of discriminatory offers and of customers' coordination problems.

³⁷ This scheme is an example of "divide-and-conquer" strategies that were initially explored by Innes and Sexton (1994).

distributors. The reason is that, starting from an exclusionary situation, any distributor could achieve the required scale by dealing with the more efficient entrant and undercutting the other distributors; as a result, it is more difficult to compensate a deviant buyer who wants to turn to the more efficient entrant.³⁸

▪ *Preserving market power*

The commitment problems highlighted by Hart and Tirole (1990), O'Brien and Shaffer (1992) and McAfee and Schwartz (1994), which prevent an upstream firm from exercising its market power when it deals with customers that are competing in some downstream market, also provides a rationale for exclusion in this downstream market: the upstream firm can indeed eliminate the risk of opportunistic behavior by entering into an exclusive deal with one of the downstream competitors, and then restore its ability to exercise market power and maintain high prices in the downstream market.

In contrast with the situations discussed above, in which downstream firms need to be compensated for the loss of potential or effective competition among suppliers, here a downstream firm would be quite willing to enter into such an exclusive arrangement, which would protect it from *downstream*, intrabrand competition.³⁹

In a similar vein, Comanor and Rey (2000) show that exclusive dealing can also occur and prevent efficient entry, either upstream or downstream, when the entry of a new competitor at one stage (upstream or downstream) not only introduces or reinforces competition at that stage but also triggers or reinforces competition at the other stage. As this is likely to result in a decrease in the joint profit of the incumbents, they have an incentive to foreclose the market in order to protect their rents. Suppose for example that: (i) an incumbent distributor D , with downstream unit cost d , is under the threat of entry by a more efficient distributor E , who enjoys a lower cost $d_E < d$; (ii) both distributors can be supplied by an incumbent manufacturer M , who faces an upstream unit cost of c ; (iii) in addition, D (but not E) can deal with an alternative supplier A who has a higher cost $c_A > c$. For example, D

³⁸ Simpson and Wickelgren (2007) and Wright (2009) stress however that the success of exclusionary strategies depends on the details of the institutional environment. See also Abito and Wright (2008), Fumagalli and Motta (2008) and Wright (2008).

³⁹ If needs be, the upstream firm can moreover share some of the profits generated in this way.

could use its influence on consumers to promote new and unknown suppliers – e.g., through private labels; or A may sell second rank products that are largely unadvertised. The cost differential $c_A - c$ can thus be interpreted as the promotion costs or the price reduction that D would have to incur to gain acceptance for the new product, and the assumption here is that these concessions would be prohibitively costly for E – that is, being a newcomer, E does not have the same influence on consumers, who are unlikely to buy unknown products at unknown stores.

Absent entry, D could charge the monopoly price p^m and share the proceeds with M . For instance, as long as the alternative supplier is not too inefficient (namely, as long as $c_A < p^m - d$), and thus exerts an effective competitive pressure on M , then M could earn its efficiency gain $c_A - c$ and D would then obtain a downstream margin equal to $p^m - c_A - d$. If instead E enters, consumers end up buying from the more efficient structure, $M - E$, at a price equal to the cost of the less efficient structure $A - D$; that is, competition at both upstream and downstream stage puts a limit on the price charged to consumers: on the one hand, at each level the more efficient firm wins the competition, on the other hand the total margin cannot exceed the cost difference. Competition thus benefits consumers, who enjoy a lower price (namely, $c_A + d < p^m$), and dissipates part of the industry profit. The incumbent firms, M and D , thus have an incentive to keep the entrant E out of the market, which they can achieve by entering into an exclusive agreement.

Shaffer (2005) emphasizes a related effect, namely, that an incumbent manufacturer can “bribe” retailers into excluding rival brands from access to scarce shelf space. Foreclosing the market in this way allows the incumbent to maintain monopoly rents, which it can then share with the retailers, e.g., through slotting allowances – other non-linear tariffs, such as quantity forcing contracts, could achieve the same purpose.⁴⁰

⁴⁰ Carlton and Waldman (2002) highlight a similar effect in the context of horizontal foreclosure in adjacent markets: an incumbent firm may deter entry into a complementary segment (even though developing new products in this adjacent market would increase the value of the incumbent’s product) if such entry facilitates entry in the incumbent’s core segment.

- *Buyer power*

Especially when dealing with supermarket chains, manufacturers often make upfront payments such as “listing fees” to become or remain a potential supplier, or “slotting allowances” to access retailer’s shelves. Marx and Shaffer (2007) argue that large distributors’ bargaining power allows them to secure upfront payments that lead to the exclusion of weaker retailers.

Marx and Shaffer consider a setting in which two retailers have all the bargaining power in their negotiations with a common supplier. They first point out that slotting allowances, combined with a large fee to be paid by the retailer in case of actual trade, allows a retailer to propose a *de facto* exclusive deal contract: the idea is that, if the supplier accepts this contract, and thus pays the slotting allowance, it will refrain from dealing with the retailer’s rivals, as the large conditional fee would lead the retailer to stop carrying the supplier – leaving the supplier having paid the slotting allowance without any off-setting revenue.

Marx and Shaffer also show that, in a competition game where both retailers can offer such contracts, the weaker retailer is always excluded. To see why, it suffices to note that in any equilibrium in which both retailers would be active, the supplier must be indifferent between accepting both offers on only one (either one) – otherwise, the rival retailer could ask for better terms and still see its offer accepted. But the retailers are not indifferent, as each one would benefit from the exclusion of its rival; it follows that the joint bilateral profit of the supplier and either retailer would be greater under exclusivity, and thus each retailer could profitably deviate by proposing to the supplier a (mutually advantageous) exclusionary offer. In equilibrium, the two retailers thus end up bidding for exclusivity, and the winner is the one that can generate the greater profit.

Miklós-Thal *et al.* (2011) show however that slotting fees are neither necessary nor sufficient for this exclusionary result. On the one hand, other non-linear tariffs (e.g., giving the option to buy some amount at cost, combined with a two-part tariff for larger amounts) provide alternative means of offering a *de facto* exclusive deal contract. It follows that, in the setting of Marx and Shaffer, the same exclusion result would hold even if slotting fees or any other form of below-cost pricing were banned. On the other hand, extending the setting by allowing retailers to offer several options (menus of tariffs), including one explicitly

conditional on exclusivity, actually restores the existence of an equilibrium in which both retailers are active (and moreover obtain their full contribution to industry profits). Whinston and Rey (2012) further show that allowing for menus of options suffice to obtain this latter result, even if the options cannot be made explicitly contingent on exclusivity.⁴¹

- *Pre-commitment effects*

Other types of vertical restraints can be used to deter entry: generally speaking vertical restraints that modify the partners' attitudes, in particular towards their competitors, can serve this purpose when they allow incumbent firms to commit themselves to a tough attitude in the event of entry. For example, long-term exclusive dealing provisions, which tie distributors to a given brand, induce them to engage in fiercer competition if competing products appear. Similarly, exclusive territories may be used to induce a tougher response in the event of geographically limited entry: in the absence of such arrangements, if a new competitor enters in a given area, an already well-established producer might be reluctant to engage in a price war, which would also affect neighboring areas. By contrast, an independent distributor with an exclusive right on this particular area would not take into account the impact on the local price cut on neighboring areas, and thus would be likely to engage in a tougher competition with the local entrant.⁴²

- *Policy implications*

This section emphasizes that vertical restraints can serve foreclosure purposes: that is, incumbents can use vertical restraints to raise entry barriers and deny or degrade access to key inputs or distribution channels, leading to the exclusion of potential or actual competitors in either upstream or downstream markets.

The vertical restraints that are most obviously concerned involve some form of exclusivity: this can be a naked exclusive deal provision, but can also take the form of a penalty for breach, an option to buy, a fidelity rebate, a minimal requirement, and so forth.

⁴¹ For a review of this literature, see Miklós-Thal *et al.* (2010).

⁴² See Rey and Stiglitz (1995) for a formalization of this idea.

Clearly, the exclusion of rivals benefits the incumbent firms, who can exert more market power, at the expense of the excluded rivals; and in the absence of redeeming virtues (such as the incumbents' original incentives to invest), the associated reduction of competition will also harm consumers and social welfare, in the short-term but also in the long-term, by preventing technological progress.⁴³

III. Policy implications: the case of Resale Price Maintenance

Resale Price Maintenance (RPM) can have many of the pro- and anti-competitive effects mentioned above and thus provides a good illustration of the above discussion. Assessing the key factors that affect the scope or the magnitude of these effects moreover highlights the policy implications that can be drawn from the economics literature on vertical restraints.

Remark: Formally, with RPM the resale price is set by the upstream supplier. In practice, however, it will be the result of bilateral or multilateral negotiations; and indeed, the parties have an incentive to set this price so as to maximize their joint profit, and then share the gain according to their relative bargaining power. In the same vein, "who is the initiator" may not be informative. The parties have again a common incentive to adopt a provision if it increases their joint profit; conversely, if the provision was decreasing the joint profit of the parties, then at least one would object to it, and no compensating transfer could make the arrangement mutually profitable.

⁴³ For formal analyses on this, see for example the literature on R&D races and on endogenous growth. Aghion, Dewatripont and Rey (1999) stresses that competition can also have positive long-term effects by disciplining firms' behaviors.

1. Efficiency benefits

RPM, in the form of either price caps or price floors, can enhance vertical coordination in price or non-price dimensions.

a. Eliminating double marginalization

By giving the upstream manufacturer control over the retail prices of its products, RPM in the form of price *caps* can obviously solve double marginalization problems. It is interesting to note that such RPM provisions can be part of a bilateral agreement between the manufacturer and the retailer: it is in the joint interest of the two parties to avoid the double marginalization issue, and there is no need for industry-wide arrangements for achieving these efficiencies.

b. Alleviating free-riding and encouraging retail services

RPM in the form of price *floors* can instead be used to avoid retailers' free-riding on the services to be provided to consumers: imposing price floors will force rival retailers to compete instead on the level of services – conversely, between two stores offering the same price, but different levels of services, consumers are likely to patronize and buy from the store offering the greater services, even if they could get the service (e.g., pre-sale advice) in one store and still buy in the other store. More generally, even for those services that cannot be subject to free-riding (e.g., enhancing the shopping experience, reducing waiting at the cashiers or offering convenient parking space), price floors allows the manufacturer to guarantee a margin on its products, which encourages retailers to promote them.

These RPM provisions could be agreed to on a bilateral basis as well if the market is sufficiently transparent; otherwise, adopting industry-wide price floor may contribute to ensure its effectiveness, by guaranteeing retailers that their rivals are subject to the same provision, and by encouraging them to report any violation.

2. Anti-competitive harm

Apart from the competition-dampening effects stemming from “strategic delegation”, RPM can have all of the other undesired effects on competition: it can be used to maintain or facilitate collusion upstream or downstream, to foster or restore the exercise of market power, and eliminate competition among “common agents”.

a. No competition-dampening effects

As noted above, competition-dampening effects rely on the notion of strategic delegation, which allows upstream rivals to commit to less aggressive behavior. RPM cannot be used in this way, however, since it does not tend to delegate upstream decisions to downstream firms but, to the contrary, tends to transfer to the upstream party the pricing decisions that would normally be taken downstream.

b. Facilitating collusion

- *Dealer cartel*

A price-floor agreement with a common supplier can clearly be used to enforce a sham dealer cartel.

- *Facilitating practice for upstream collusion*

As shown by Jullien and Rey (2007), RPM can facilitate collusion among rival manufacturers by enhancing retail price transparency: in the absence of RPM, local prices would respond to local supply and demand conditions, which tends to generate some opaqueness in the market, making it more difficult to detect deviations by a manufacturer. By allowing manufacturers to impose uniform prices, RPM makes the market more transparent and deviations easier to detect, thus facilitating collusion in this way.

It should be emphasized that this motivation calls for the strongest form of RPM (dictating the retail price, rather than imposing a price cap or a price floor), and not only for market-wide agreements (imposing the same price to all retailers, so as to ensure that the final

price of a product is indeed uniform across local markets), rather than bilateral agreements (in which the agreed resale price could vary from one retailer to another), but also industry-wide prevalence (that is, all the manufacturers participating to the collusion scheme should adopt similar schemes).

c. Restoring the exercise of upstream market power

As shown by O'Brien and Shaffer (1992), RPM can also be used to solve the commitment problems of upstream firms when they deal with competing downstream firms, and restore in this way the upstream firms' ability to exercise market power. This can constitute a serious concern when, as discussed in section I.2.c: (i) the upstream firm could in principle exert significant market power; but (ii) private negotiations with the downstream competitors foster the risk of opportunistic behavior, leading the upstream firm to grant discounts that eventually drive down retail prices, thus preventing the upstream firm from fully exerting its market power. O'Brien and Shaffer quote for instance the president of Titleist, a manufacturer of golf balls:

“If Nevada Bob's lowers prices on our balls, other outlets eventually will have to lower prices, too. Eventually, it could force us to lower the price at which we sell balls to our retailers. That's not good for us and it's why we put the policy in place.”

In such a situation, imposing an industry-wide retail price floor prevents downstream competition from percolating upwards, thus allowing the upstream firm to exert more fully its market power, at the expense of consumers and society.⁴⁴

O'Brien and Shaffer also show that purely bilateral (i.e., retailer-specific) maximum resale price maintenance contracts can also work, as squeezing downstream margins eliminates the upstream firm's incentives to free-ride on downstream rivals in its negotiations with a particular downstream partner. Suppose indeed that a manufacturer offers each of its

⁴⁴ O'Brien and Shaffer quote the following testimony of a grocery store owner before the U.S. Congress: “The pressure of competition begins at the retail level. When retailers are very competitive, they make demands on their wholesalers and brokers for price relief, such as quantity trade discounts. The wholesalers and brokers, in an effort to protect their retail customers, plead with the manufacturer for a lower price. The manufacturer, in turn, strives to improve his efficiency to lower costs and thereby reduce his price.... If the retail price is fixed, all prices down the line of distribution are stable and everyone is happy, except the consumer.”

retailers a contract specifying a price ceiling and a wholesale price both equal to the monopoly price for that retailer. Reducing the downstream margin protects the retailer against any adverse impact of rivals' price cut and, by the same token, removes any incentives for the manufacturer and the other retailers to engage in opportunism. As a result, the manufacturer can maintain retail prices at the monopoly level, and share the proceeds with its retailer through e.g. backroom margins such as slotting allowances or rebates on limited volumes.

d. Interlocking relationships

Rey and Vergé (2010) shows that, in markets characterized by interlocking relationships, that is, when the same rival manufacturers rely on the same rival retailers for the distribution of their products, RPM can eliminate *all* competition, both upstream and downstream: eliminating intrabrand competition among the retailers allows the manufacturers to use them as “common agents” to alleviate interbrand competition.

The French experience of the last decade illustrates this potential effect of RPM. Although RPM or price floors are illegal in France, in 1996 the Galland Act introduced a ban on below-cost resale, which was then used by manufacturers and retailers to implement *de facto* price floors: the “cost” below which retailers could not resell the goods being defined as the invoice price, raising artificially the invoice prices at the desired level enabled the firms to set effective price floors, and they could then share the profits through so-called “backroom margins” such as slotting fees, end-of-year rebates and so forth.⁴⁵ In the years that followed the adoption of the Galland Act, the prices of national brands in French supermarkets evolved much more rapidly than in the other European countries.

Two empirical studies further show that this period was characterized by a lack of competition. Using data about retail prices of food products in French retail chains during the period 1994-1999 (thus covering the time where the Act was adopted), Biscourp, Boutin and Vergé (2008) find that the correlation between retail prices and the concentration of local

⁴⁵ To be clear, the Galland Act only opened the *possibility* to implement price floors, it did not make their use mandatory: nothing prevented manufacturers and retailers to rely on standard tariffs such as the ones previously in place, in which backroom margins play a much smaller role and invoice prices were therefore quite close to the actual (“net”) wholesale prices. For evidence that the Act was indeed used as described above, see the *Canivet* report, available at www.courdecassation.fr/IMG/File/Rapport_version_definitive.pdf.

retail markets was important before 1997 and no longer significant after that date. This suggests that the price increases that occurred after 1997 were indeed due to the impact of the new legislation on intrabrand competition.

Bonnet and Dubois (2010) test our insights more directly using micro-level data (home-scan panel data of about 11000 French households) about the French market of bottled water during the 1998-2000 period. They first estimate the demand for the different brands of bottled water, and then compare alternative models of vertical and horizontal relationships between firms: with linear or two-part tariffs, with or without collusion, and with or without RPM. They find that one model outperforms the others, and that model involves two-part tariffs and RPM. They also show that the retail price is 7.4% higher than the price that would prevail in the absence of RPM.

In practice, RPM can also be enforced through the use of “recommended prices” or “focal prices” (such as public catalogue prices), coupled with sanctions for discounters. The above analysis suggests that, in case of interlocking relationships, manufacturers and retailers have a common interest in enforcing such arrangements, so as to avoid interbrand as well as intrabrand competition. For example, in December 2005, the French competition agency condemned Panasonic, Philips and Sony for “vertical collusion” with their wholesalers and retailers, finding evidence that these manufacturers were actively monitoring retailers in order to ensure that they were actually following their recommended retail prices (especially for new product lines), and pushing wholesalers to refuse to supply price-cutting retailers.⁴⁶ Major perfume manufacturers (L'Oréal, Chanel, Guerlain, Dior, and others) and retailers (Nocibé, Marionnaud, Séphora) were condemned for similar practices, as well as toy manufacturers (Chicco, Lego, ...) and retailers (Carrefour, JouéClub, ...).⁴⁷

⁴⁶ See Conseil de la Concurrence, decision 05-D-66, December 2005.

⁴⁷ See Conseil de la Concurrence, decisions 06-D-04 (March 2006, Perfumes) and 07-D-50 (December 2007, Toys).

3. Key factors

The above discussion highlights several key factors that are relevant for assessing the competitive effects of RPM.

a. Industry structure

- *Types of distribution channels*

The literature highlights the distinction between two distribution modes: in the “franchising” mode, competing manufacturers rely on distinct distribution channels; by contrast, in the case of “interlocking relationships”, competing manufacturers rely on the same (competing) distribution channels.

The literatures also stresses that RPM is more likely to raise more serious anticompetitive concerns in the latter case (interlocking relationships). In essence, in this case the retailers can act as “common agents” for competing brands; by eliminating intrabrand competition between these common agents, vertical restraints such as RPM can eliminate interbrand competition as well. In addition, in the “franchising” mode, the above discussion highlights the importance of upstream market power.

- *Tight oligopolies vs. competitive industry*

Another key feature of the industry structure, in connection with the risk of collusion, is the level of concentration. In dispersed industries, collusion is unlikely and thus the role of RPM as supporting a dealer cartel or as facilitating collusion among upstream firms is not a serious concern. By contrast, these concerns gain weight in markets with significant entry barriers and a small number of competitors.

Other relevant factors⁴⁸ in the same vein are the frequency of interaction (collusion being a more serious concern in case of frequent interactions), the degree of market

⁴⁸ For a detailed analysis of the relevant factors that may affect the scope for collusion, see e.g. Ivaldi *et al.* (2003).

transparency with and without RPM, whether industry players are in more of less symmetric positions (collusion being more likely among equals).

b. Bilateral contracts versus industry-wide practices

The above discussion also distinguishes RPM provisions that are part of bilateral contracts from those that are part of industry-wide agreements.

It is striking to note that purely “bilateral” RPM agreements often suffice to achieve most of efficiency gains. This is the case for the elimination of double marginalization, and is the case as well, if the market is sufficiently transparent, for fighting free-riding and encouraging instead the provision of retail services, or for protecting relationship-specific investments. Even if the market is not transparent, the adoption, by a given manufacturer, of a “general” RPM provision (applying to all of its retailers) suffices to achieve all the efficiency benefits mentioned above.

By contrast, the anti-competitive effects of RPM rely on the practice being prevalent in the industry. Thus for instance, RPM is less likely to facilitate collusion among rival manufacturers if only some of the manufacturers adopt it; similarly, in the case of interlocking relationships, RPM need to be adopted by all firms in order to eliminate both interbrand and intrabrand competition.

c. Temporary versus permanent programs

In the same vein, temporary programs suffice to achieve some of efficiency benefits, e.g., in order to encourage the promotion of a new product at the time where it is launched, or when entering a new market. By contrast, more permanent programs are needed to give rise to most of the anticompetitive effects, be it to facilitate collusion or support sham dealer cartels, or to eliminate both interbrand and intrabrand competition in case of interlocking relationships.

IV. Concluding remarks

The above analysis shows that vertical restraints can yield efficiency benefits but also serve anticompetitive purposes. In addition, the same restraints can have similar effects in some market environments, and different ones in other markets. Therefore, to assess their impact, it is important to focus on the effect on competition, rather than on the form of the vertical restraint.

Another lesson from the above analysis is that the anti-competitive effects are more likely when at least one of the partners has market power; conversely, the more market power there is, the greater the concern about anticompetitive effects. This is particularly relevant for the Chilean economy, which is both small and concentrated; some of the key retail industries have just a few participants, and in most markets interbrand competition is oligopolistic in nature. In this context, market power is likely to be important, which can encourage unilateral conduct aiming at exploiting it more fully, as well as strategic behavior aiming at softening competition between incumbent rival vertical structures or foreclosing the market to new competitors. In this context, vertical restraints such as RPM and exclusive dealing must be analyzed carefully, as the possibility of anticompetitive effects is more likely.

Softening competition strategies are for instance easier to implement when there are few suppliers enjoying substantial market power. Retailers can also play a key role, as they can act as gatekeepers for consumer access. A retailer that dominates the market can for instance act as a “common agent” to coordinate suppliers’ pricing decisions, thus eliminating interbrand rivalry. When several retailers are instead active downstream, and carry the same competing brands, suppliers still have an incentive to use them as common agents, and can do so by using vertical restraints, such as exclusive territories or RPM – either as part of the contractual arrangements, or by enforcing it informally by monitoring and punishing discounters – so as to eliminate or at least reduce intrabrand competition among the retailers. In such situations of “interlocking relationships”, vertical restraints can thus affect both intrabrand and interbrand competition. Additionally restraints such as RPM can be used to maintain more uniform retail prices, so as to make collusion easier to implement, monitor and sustain. Conversely, vertical restraints can also be used to facilitate collusion downstream, or to soften competition among retailers, e.g., through inflated marginal wholesale prices,

coupled with slotting allowances or other forms of “backroom margins”. This risk is again more important in concentrated retail markets such as those often encountered in the Chilean economy.

Exclusionary practices such as exclusive dealing, or loyalty schemes such as fidelity rebates, slotting allowances or penalties for breach, can be used to foreclose market access to more efficient competitors. This conduct is more likely when an incumbent producer or retailer dominates one stage of the vertical chain. It is for instance easier to implement if distribution channels are concentrated and if the economies of scale on distribution are relevant, as is the case in some relevant Chilean retail industries.

Vertical restraints can also bring efficiency benefits, e.g. by allowing enhanced vertical coordination between upstream and downstream decisions and efforts. Price restrictions can for instance foster non-price competition, and granting some exclusivity rights can mitigate hold-up problems and encourage relationship-specific investments. To assess the importance of these benefits, a key step lies in identifying the characteristics of the services or of the investments that need to be promoted -e.g. are they likely to be subject to free-riding, how much recoupment is needed, etc. Also, the efficiency benefits can often be obtained with bilateral, retailer-specific arrangements, with a limited duration proportional to the magnitude of the efforts and investments at stake. By contrast, exclusionary conduct by a dominant firm usually requires market-wide restraints. In the same vein, facilitating practices, as well as practices aiming at softening competition among oligopolistic firms, are effective only when they are adopted by most if not all the key industry players.

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