ECONOMIC PAPERS

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ECONOMIC AND FINANCIAL AFFAIRS

Number 119 November 1996

The Policy Implications of the Economic Analysis of Vertical Restraints

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II/625/96/EN This paper exists in English only.

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SUMMARY

The economic analysis of vertical restraints has been the subject of very active research during the last decade. This has resulted in a substantial modification of the generalised perception that economists had at the beginning of the 1980's about the economic consequences of vertical restraints and the treatment to be given by competition policy to vertical agreements. While in the early 1980's economists considered vertical restraints as being relatively innocuous for competition, nowadays, economists tend to be much more cautious in the assessment of the welfare impact of vertical restraints and introduce substantial qualifications in their recommendations to competition polic makers.

This change in the economists' perception of the effects of vertical restraints has been due to the much more sophisticated tools currently available for the economic analysis of markets. Basically, the new approach to the study of vertical restraints permits to take into consideration the existence of imperfect competition both at the levels of production and distribution. This allows us to consider the impact of vertical restraints on competition among producers on one side and distributors on the other.

The purpose of this paper is to study the advantages and disadvantages of alternative treatments of vertical restraints in the framework of European competition policy. It is evident that in order to meet that objective, all recent contributions of economic analysis have to be taken into account. Here below, we present our interpretation of the main learnings that can be drawn from economic analysis for competition policy making.

In section II of the paper we describe and define different types of vertical restraints as perceived by modern Industrial Economics. Section III presents a brief e. Section III presents a brief account of the current legal framework affecting vertical restraints in the EU. The core of the paper is dedicated to the economic evaluation of different kinds of vertical restraints and provide an economic reading of the new findings with a view to defining guidelines for European competition policy. In the conclusions, we present our main policy recommendations on the basis of theeconomic literature reviewed .

On the basis of the analytical evidence available, we conclude that no "per se" rule can be applied to the treatment of vertical restraints by competition policy. However, the cost of evaluating each agreement on a one-by-one basis may not be justified in many cases. It is possible to characterise certain situations where the threat that vertical restraints can pose to competition can be considered as negligeable. The existence of active inter-brand competition plays a crucial role in the definition of those "safe harbour" situations.

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I. INTRODUCTION.

Most economic transactions between consumers of final goods and services and the suppliers of those goods and services take the form of arms-length transactions. Consumers change shops or products bought as prices change and as they modify their preferences over time and there is seldom any long term relationship between any particular consumer and the supplier of the good or service bought[1]. However, as we go up in the ladder of the value-added chain, arm-length transactions become less and less frequent. Suppliers of primary inputs, intermediate products, manufacturers, wholesale distributors and retailers are often bound by long term contracts or agreements. This is particularly frequent in the case of the distribution stages. Retailers and wholesalers normally offer a relatively constant range of products which leads them to purchase and stock the same products from the same manufacturers for a long period of time. To minimise transaction costs, producers and distributors tend to sign medium or long terms supply contracts allowing them to maintain a steady business environment with continuous supplies under relatively stable conditions during the relevant time span for each line of business.

Any contract establishes obligations on the signing parties and has an influence on the way those parties will behave from that moment on in the market. In that sense, we can say that competition conditions are modified by those long term agreements. Sometimes, those agreements just aim at solving problems due to market imperfections or market failures. Under certain circumstances, the resulting modifications in competition conditions may not imply restrictions of competition, at least in the legal sense of this term as interpreted in European competition practice. In other cases, the modifications in competition conditions may be acceptable because despite restricting competition to a certain degree, they may have beneficial net effects on welfare that justify their existence.

However, those agreements and contracts give the opportunity to the parties involved to introduce clauses or mechanisms having an adverse impact on competition, through the elimination of competitors, market sharing or any other way and hence, require the intervention of competition regulators. Sometimes, the restrictions of competition may not be the objective pursued by the parties to the agreement, but just a non-desired effect of the agreement. Even in those circumstances, at least under European competition rules, those agreements should be the subject of modification or prohibition to avoid their negative effects on competition.

In the presence of a notification or a complaint involving a vertical agreement, competition authorities have to assess their economic impact in order to make a legal assessment of the agreement. The economic theory of vertical restraints has developed considerably in the last ten years (see Waterson (1994) and Rey (1994) for surveys on this evolution). We have gone from a general perception about the innocuous nature of vertical restraints[2] that prevailed in the early 80's and which found its most clear formulation in the US Guidelines of 1985, to a more sceptical view in which the impact of the agreement depends to a large extent on the circumstances of the agreement. More

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[1] The purchase of durable goods requiring maintenance or the existence of guarantees for certain products can be considered as long term relationships. However, in both cases there usually is just one main purchase involved in both types of cases and not repeated or recurrent transactions as there are between producers and distributors.

[2] Usually, in economic theory prices are linear, i.e. the buyer pays the seller an amount proportional to the quantity so proportional to the quantity bought. Vertical restraints appear when vertical relationships involve more complex contracting arrangements, such as the exigence of a given resale price, franchise fees, minimum quantity fixing or some sort of exclusive relationship tying buyer and seller. In section II below we present a complete characterisation of vertical restraints.

sophisticated modelling of the complexities of vertical relations have allowed to obtain new insights that often warn us about the consequences of vertical restraints for competition.

This state of affairs makes life harder for competition authorities. As the US Supreme Court decision has shown in the Kodak case, the situation is no longer as easy as in both the pre-Sylvania and post-Sylvania "worlds". A favourable or negative a priori predisposition with respect to vertical restraints can no longer be supported by economic analysis. This implies that *per se* approaches to vertical restraints cannot be maintained. The assessment of the competition impact of vertical agreements has now to be largely dependent on the economic analysis of the case.

However, this is not the only source of new difficulties for competition regulators. In the first place, quite often, the economic evaluation of a case would require highly sophisticated methods which are not available to competition agencies. Sometimes, the cost of the economic analysis and the expected probability of getting a clear-cut answer from economic theory may not justify the cost of carrying out that analysis. Secondly, economic theory does not have a complete set of answers to all the problems that appear in the context of vertical restraints. Areas such as the economic analysis of buying power are starting to be studied now. Moreover, the proliferation of clauses or the legal complexity of the agreement may make it intractable by economic analysis. Finally, it should be recalled that economic rationality is not the only source of anti-trust. Social, political or in general, other types of "fairness" or "equity" considerations and not just efficiency in the allocation of resources are also objectives of anti-trust. Under certain circumstances, it may be difficult to maintain full compatibility between economic rationality and some of these considerations, which has to be considered as an additional difficulty for anti-trust authorities.

The purpose of this paper is to provide a "state of the art" description of the economic analysis of vertical restraints which can be helpful for the design of policy options for the future treatment of vertical restraints by competition policy in Europe. This paper should be the basis for the chapter on the Economics of vertical restraints of the Green Book the Commission will publish in 1996. With a view to provide operational guidelines in that chapter, we shall try to follow the following two principles here.

1. Firstly, we will try to provide a reading of the economic literature in this field **in the light of the structure of article 85 of the Treaty,** regulations and jurisprudence of the Court of Justice. In other words, we will try to translate the main results of the literature in terms of the concepts included in that article such as "restriction of competition", "benefits to consumers", etc. This will require the development of an economic interpretation of those legal terms. This is provided in section III below. The contents of that section is our personal interpretation of that article and , like the rest of the paper, does not represent in any way the official position of the Commission.

2. Secondly, we will strive to concentrate on **robust results**. The final objective of this exercise is to provide a solid basis for a policy document and not to produce an academic survey of the literature for research purposes. The existence of theoretical possibilities for certain effects are useful for us only insofar as they can be tested by competition authorities with a relatively simple set of analytical instruments. In the same sense, it is also important for this exercise to clarify which questions can and which ones cannot be solved by economic analysis.

Vertical restraints can be quite complex in nature. They can also be present in different stages of the value added chain as they can affect suppliers of primary inputs in their relations with manufacturers, manufacturers in their relations with wholesalers or the latter in their relations with retailers. They can also affect final products, inputs, intermediate products or even intangible goods such as technological know-how. Moreover, vertical restraints are seldom present in an isolated or pure form. In most cases, vertical restraints appeared combined in the same contract or agreement and the direction of the effects of each restraint may be different. Economic analysis has necessarily to take place in a simplified environment. In this paper, we will deal with each type of vertical restraint in an

isolated way. Furthermore, we will restrict ourselves to a simplified "vertical structure" that will consist of a manufacturer of final products, who does not get involved in any type of distribution activities and deals with one or several distributors, who face final consumers of the good in question.

The structure of the paper is the following. In the next section we present a basic interpretation of the nature and effects of vertical restraints from an economic point of view. In section III we carry out a simple interpretation of the text of article 85 from an economic perspective. Sections IV and V constitute the core of the paper. There we present an economic analysis of vertical restraints and then discuss their policy implications. Finally, section V summarises the analysis and provides policy recommendations.

II. THE NATURE AND IMPACT OF VERTICAL RESTRAINTS: What are vertical restraints ?

Most relationships between manufacturers and distributors use more than wholesale prices. Instead, they are often governed by contractual provisions, broadly named "vertical restraints", that not only set more general terms for payments (non-linear prices, royalties, fees, etc.), but also alter one or the other party's behaviour (resale price maintenance aims for example at monitoring distributors' pricing policy, whereas the granting of exclusive territories limits manufacturers' development policy).

From an economic perspective, we can identify three different groups of explanations for the existence and nature of these agreements on the basis of their origin, objectives and effects.

- Vertical restraints as firms' responses to market failures and imperfections. In the relationships between producers and distributors and in the horizontal relationships between producers and distributors that compete against each other, certain market failures or imperfections may arise that justify the introduction of clauses in their contractual relationships to avoid those adverse effects. For example, in the producer-reltailer relationship, the existence of some market power at the producers level implies that retailers do not gain all the benefits of actions taken to improve sales such as advertising that will accrue to the manufacturer. In that case, retailers will tend to maintain those sales efforts at a socially sub-optimal level. Vertical restraints can be introduced in that relationship as a response to market imperfections in order to avoid the negative impact of that externality. In the following pages we will try to identify different circumstances in which vertical relationships may arise as a consequence of market failures and imperfections.

- Vertical restraints as anti-competitive instruments. In other cases, vertical restraints can be used by firms as instruments to increase their market power at the expenses of actual or potential competitors, business partners (either maunfacturers or distributors) and/or consumers. It is important to bear in mind that, even though some vertical restraints may have their origin in the existence of market failures or imperfections, they can in fact turn out to be instruments against competition if they have that effect. Therefore, the classification of vertical restraints in these two groups does not just depend on their origin or object but also on their final -intended or unintended- effects.

- Vertical restraints resulting from "prisoners-dilemma situations". Under certain circumstances, vertical restraints may arise as an unwanted market outcome. Even though firms' might collectively be ineterested in not engaging in certain types of contracts with vertical restraints, non-cooperative competition between them may lead them to introduce them. (Chang 1992)

Below we briefly describe the most common vertical restraints, without paying attention to their origin, object or effects for the time being.[3]

3 This classification builds on the classification proposed in Rey and Tirole (1986).

a. Payment schemes

A uniform price constitutes a "linear price", according to which the payment is proportional to the quantity bought by the distributor. Several provisions allow the firms to depart from this linear pricing rule.

i. The simplest form of nonlinear pricing schemes consists in including, besides the (uniform) wholesale price, a *franchise fee* (this combination is also referred to as a two-part tariff). By definition, a franchise fee is a payment where the amount due does not depend on the quantity purchased from the manufacturer. The fee may however depend on factors such as the population within some specified distance of the distributor's location. Also, the fee may be a one-time charge or may be due periodically, e.g. annually.

Other forms of non-linear tariffs include progressive rebates on the quantity bought by the distributors (quantity discounts). Note that it suffices to observe who carries the manufacturer's products to enforce a franchise fee provision, whereas more general non-linear tariffs require more information to be enforced (and may be constrained by legal restrictions). In the case of progressive quantity rebates, for example, the distributors could get the highest rebate by "pooling" their orders. To avoid this arbitrage the manufacturer must be able to observe not only the quantity bought but also the quantity sold by each distributor. More generally, nonlinear prices give distributors incentives to set-up a secondary market, making the non-linear pricing policy ineffective.[4]

ii. Royalties are another kind of payment, based on the distributor's sales, measured either in units or in revenue. Contrarily to linear or nonlinear wholesale tariffs, royalties do not depend solely on the on the quantity bought by the distributor from the manufacturer: they depend on actual sales instead of potential ones, and sometimes, they depend as well on the sales of other goods. In effect, royalties allow the manufacturer to impose a tax on rivals' products.[5] Note that the use of royalties supposes that the manufacturer is able to monitor the distributor's sales.

All these different payment structures directly affect the sharing of the "pie" between the manufacturer and the distributor, but also indirectly affect the "targets" (final prices, promotional effort, risk sharing, etc.) that determine the size of the pie.

b. Provisions that limit the distributor's rights

i. Resale price maintenance is a provision according to which the final price charged by distributors to consumers is set by the manufacturer. This restriction has several variants, including price ceilings, price floors, non-binding "recommended" or advertised prices. Resale price maintenance or price floors supposes that price cuts can be detected at reasonable cost. Note that price cuts can also take the form of non-monetary concessions: unregistered services, free delivery, and so forth.

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4 Arbitrage is still possible if the average price increases with the quantity bought (the opposite of progressive quantity discounts). In the absence of arbitrage, small distributors enjoy lower (average) prices. If arbitrage is possible, however, small distributors would then have an incentive to increase their orders and resell to larger distributors. More generally, whenever unit (wholesale) prices are not uniform the centralization and reallocation of distributors' orders allow them to minimize their average unit price.

5 A wholesale price w and a royalty rate r are equivalent to a wholesale price $w' = w+r$ and a tax $t=r$ on rival products. Free disposal rules out negative w's, so that the tax on rival goods cannot however exceed the total wholesale price for the manufacturer's product: $t=r < w'=w+r$.

ii. Quantity fixing is a provision that specifies the quantity to be bought by the retailer. Variants of this restraint include quantity forcing, which imposes to purchase a minimum quantity, and quantity rationing, which specifies a maximum quota. If demand is known and is a function of the final price only, then quantity forcing is equivalent to a price ceiling and quantity rationing to a price floor -- and thus quantity fixing is equivalent to resale price maintenance.[6] (Another variant requires the distributor to achieve a minimum sales revenue.)

iii. Under an *exclusive dealing* agreement, the distributor agrees not to engage in any other business that competes directly with the manufacturer's activities (or even in any other business). A variant consists of a "requirements contract" which requires the distributor to buy all goods exclusively from the manufacturer. Practical variations of exclusive dealing are exclusive purchasing and, to a certain extent, selective distribution.

iv. Tie-in provisions imposes on the distributor the obligation to buy one or more goods from the manufacturer in addition to the ones that the distributor initially wants to carry on. Use of a tie-in supposes that the manufacturer can verify the goods carried on by the distributor, particularly if some of the goods provided by the manufacturer are priced above the market price for such products. A particular type of tie-in consists of full line forcing, which requires the distributor to carry the manufacturer's whole range of products. Full line forcing often is associated with exclusive dealing obligations, but either obligation may be included in an agreement without the other.

c. ***Provisions that limit both parties' rights***

Territorial or customer provisions may limit the territory or group of customers that a particular distributor may serve. By granting a distributor an exclusive territory, on the other hand, the manufacturer commits himself not to allow any other distributor to serve the customers in this territory, thereby protecting the distributor from intraband competition in the given territory. "Territories" need not refer to geographical ones, but may as well refer to any kind of segmentation of the market. If for example the manufacturer's products are distributed both by mail order and through retail stores, a "territory" might be the mail order part of the market. Other examples are the distinctions between business and non-business customers or between small businesses and large firms.

Exclusive territories may impose more or less strict restrictions. Less strict provisions stipulate that the manufacturer only commits himself not to compete actively with the distributor in a given territory (either directly or through other distributor) and the distributor undertakes not to compete actively for customers in other territories. This is for example the case when the manufacturer only dictates the location of outlets, but consumers are free to choose between them: in that case, a distributor cannot set up another outlet without the manufacturer's approval, but can still sell to customers coming from outside his territory. Slightly stricter provisions prevent the distributor from advertising outside his territory, while absolute exclusive territories simply prevents him from selling to customers that are not part of his territory --and grants him a monopoly position for the manufacturer's products in his own territory, thereby completely dividing the market among distributors. Also, in some instances these territorial restrictions are combined with no-reselling provisions.[7]

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6 If for example the distributor can sell to or buy from other distributors, however, then the equivalence between price and quantity controls vanishes.

7 This issue there is whether customer restrictions also prevent the distributor from reselling to other distributors (that may or may not be approved by the manufacturer). The European Union for example allows in some instances the use of exclusive territories, but prevents manufacturers from banning parallel imports. Hence, a non-registered distributor in a given territory (country) can buy from (registered) distributors from another country.

The enforceability of territorial provisions critically depends on their strictness and on institutional constraints. For example, specifying the number and/or the location of outlets is relatively straightforward, whereas a distributor's commitment not to compete outside his territory may be more difficult to enforce. The strictest provisions are likely to raise the most difficult enforcement issues; in that case, the manufacturer or distributors that are being cheated must be able to trace consumers[8] and to prove, in case of cheating, that the distributor was aware of their origin, or at least negligent in not obtaining the information.

These various restraints of course do not exhaust the list of provisions that manufacturers and distributors might include in their contracts. Other controls or obligations on either party are likely to be important, and the more complex the relationship is, the more numerous these other provisions can be. The manufacturer may for example commit himself to a minimal product quality, to specific (nation-wide) advertising, technical help, professional training or accountant services; the distributor may commit himself to specific levels of promotional effort or customer service. Some other clauses may limit the distributor's right to compete with the manufacturer after termination of the relationship.

III. ECONOMIC INTERPRETATION OF THE LEGAL FRAMEWORK

Article 85(1) prohibits "as incompatible with the common market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market". Article 85(3) provides that agreements, decisions or practices that otherwise would be prohibited by article 85(1) may be exempted if they meet four conditions. First, two positive conditions must be satisfied: an agreement may be exempted if it (i) "contributes to improving the production or distribution of goods or to promoting technical or economic progress" while (ii) "allowing consumers a fair share of the resulting benefit". An agreement that satisfies these two conditions can be exempted only if it also (i) does not "impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives" and (ii) does not "afford such undertakings the possibility of eliminating competition with respect to a substantial part of the products in question". Exemptions are allowed either by decisions on individual agreements or by block exemption regulations (Regulation of the Council No. 19/65, OJEC 533 (1965) empowers the Commission to apply Article 85, paragraph 3 by block exemption regulation.).[9]

Determining whether a particular vertical arrangement falls under Article 85(1) therefore requires an assessment of its impact on competition. Unfortunately, although competition is a key concept in the analysis of market economies, there does not exist a single, well-defined and unambiguous measure for it. Looking at final prices, for example, may not suffice if the use of a vertical restraint results simultaneously in a price increase for one product but a price decrease for other products. Also, in some instances, a particular arrangement may lead to a transitory increase in prices and, at the same time, to enhancements in manufacturing and distribution (or, precisely, in the interface

8 This is likely to be easier at the wholesale level, that is, when distributors are wholesalers whose customers are retailers or other types of outlets, of which an exhaustive list can be made and kept updated at a reasonable cost. At the final customer level, it is also possible in some instances to trace consumers through e.g. the use of warranty cards that each customer has to send back to the manufacturer.

9 Article 85(1) is not applied to agreements that do not affect trade between Member States or exerts no appreciable effect on market conditions (i.e., if the market shares of the firms involved do not exceed 5 per cent and if their combined annual turnover within the EC does not exceed 200 million ECU - Commission Note on agreements of minor importance of 3 September 1986. OJEC No. C 231 of 12 September 1986).

between the manufacturing and distribution stages), eventually resulting in tougher "competition" and lower prices in the future (either because these technological advances are then copied by other firms, or because the generated profits are invested to further improve technology in the future). In such instances, should we focus on current prices, on future prices ?

Economic analysis provides instruments to measure economic "efficiency". Cost functions, for instance, can be used to measure productive efficiency, while firms' profits provide a measure of their economic welfare. Likewise, and even though this is a more debatable issue, consumer surplus --formally defined as the integral of their demand function-- can be used to measure consumers' economic welfare.[10] The sum of all firms' profits and of consumer surplus can then be used to measure total economic welfare --and discounted sums allow for a dynamic perspective. However, concepts such as "restriction of competition" do not have a clear correspondence with any standard welfare economics concept. Thus, the economic interpretation of European competition law requires the development of a correspondence between standard economic concepts with the relevant legal concepts appearing in the Treaty and Court judgements. What follows is our economic interpretation of these legal texts.

In order to be able to distinguish from an economic point of view, between cases or situations compatible with European competition rules from those which are not compatible with those rules, it is necessary to establish some type of correspondence between the legal concepts used in the Treaty and the concepts and propositions traditionally used by economic analysis.

Modifications of competition conditions resulting from agreements between producers and distributors do not necessarily have a direct or net negative impact on competition. Article 85 of the Treaty establishes that agreements between undertakings that affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market are prohibited and void, unless they can benefit from an individual or group exemption. This legal construction implies that many agreements meeting the broad prohibition conditions established by Art. 85.1. may still be acceptable from the point of view of competition rules, if they satisfy certain efficiency and distributive conditions established in Art. 85.3. For that reason, we must distinguish between agreements having a negative direct effect on competition -i.e. that restrict competition in the sense of Art. 85.1, and which may or may not be exemptable-, and those having a negative net impact on competition, if besides having a negative direct effect they are not exemptable. In other words, the first concept would correspond to agreements falling under Art. 85.1 but exemptable under 85(3) and the second one would refer to those cases falling under Art. 85.1 and not meeting the requirements for an individual or group exemption.

Furthermore, the economic interpretation of Art. 85 requires providing an economic meaning to the concept of competition or more exactly, to the idea of restriction of competition. It seems evident that the legal concept of competition does not coincide with the assumptions underlying the economic model of perfect competition. But if we leave aside the model of perfect competition, there is not an alternative clear economic definition of competition. Demsetz (1982) and more recently Vickers (1995) show this quite clearly. Fortunately for our purposes, what we need here is not a full definition of "competition" as such, but some economic equivalent to the legal term "restriction of competition" to be able to identify cases or situations falling under the prohibition of Art. 85.1 and 2. This is a more simple problem.

[10] This measure is a valid measure of consumer welfare if consumers have a constant marginal utility of income -- in that case, consumer surplus is a monetary equivalent of consumer indirect utility, that is, of the maximal utility consumers can get given the prices they face. If consumers do not have constant marginal utility of income, consumer surplus still reflects changes in consumers' utility for small evolutions of competitive equilibria.

Taking into account the full text of Art. 85, we will identify here below the existence of a restriction of competition in economic terms, whenever the agreement or contract under consideration has at least one of the two following effects:

- Firstly, when it leads to a market outcome which takes us away from the perfect competition outcome and bring us closer to the perfectly collusive outcome or

- Consumers are worse off as a result of the agreement.

In other words, any reduction in social welfare as measured by the sum of consumers and producers surplus can be considered-from an economic point of view as a restriction of competition. This seems to be an easily justifiable interpretation of the concept restriction of competition bearing in mind the fundamental theorems of welfare Economics. . However, the practice and the legal interpretation of European competition rules suggests a broader meaning of this concept. For this reason, even if total welfare increases, we will still accept that there is a restriction of competition if the agreement reduces consumer surplus only. This interpretation of the concept is suggested by the text of Art. 85.3., where consumer surplus is given particular importance. We interpret this as an indication that the legislator has a concept of social welfare different from the standard simple addition of consumers and producers surplus. According to this interpretation, social welfare increases whenever the addition of consumers and producers surplus increases, subject to the restrain that consumer surplus remains, at least the same.[11] Although this concept is not the usual found in economic theory, it is perfectly consistent with economic analysis and can be workable concept for the application of the results of economic literature.

We should recall here that for the assessment of the economic impact of vertical restraints on competition, we have to take into account the impact of the restraint on the two markets usually involved in the "vertical structure", i.e. the market where retailers of one or different brands compete against each other and the market in which producers compete against each other for the purchases of downstream retailers. Following the traditionally strict interpretation of article 85 (1) in European competition law, we will assume that there is a restriction of competition whenever competition is restricted in the sense explained above in any or both of these markets.

Finally, it is worthwhile mentioning that the economic analysis of vertical restraints requires a much less detailed typology than the legal analyis of the same topic. Although a distinction may be sensible from a legal perspective, the economic analysis of exclusive territories is basically the same whether it refers to pharmacies competing in a certain neighbourhood or to companies operating in a national territory. Moreover, the economic analysis of vertical restraints concerning certain specific issues such as minimum purchasing obligations do not require an economic analysis particularly devised for this type of economic context. For these reasons, the spectrum of issues analysed below is necessrily more restricted than a legal analysis of vertical restraints would require. There is just one exception to this: the case of vertical restraints in the context of international trade. The allocation of exclusive territories or exclusive dealing clauses for instance require an special treatment in the context of international trade and economic integration. These issues will be dealt with in a different paper that will be exclusively dedicated to the relationship of market integration and vertical restraints in the Euorpean context. Only in the section dealing with entry consideration we will occasionally refer to those problems here.

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[11] We are fully aware that the concept of "restriction of competition" as presented in Art. 85.1. is not equivalent to the "balance" of efficiency and distributional effects established as a requirement for the application of an exemption to the prohibition. However, we understand the importance given by Art. 85.3. to consumer surplus as an indication that for the European legislator, one ECU of consumer surplus is not equivalent to one ECU of producers surplus. The practice of European competition rules seems to point out in the same direction too.

IV. ECONOMIC EVALUATION OF VERTICAL RESTRAINTS

In this section we discuss types of vertical restraints presented in section II above, but paying attention now to their possible origin, object and economic effects. We will use the following framework. One or several producers use retail networks to distribute their goods (in some instances, the distribution network upon consideration may be wholesale networks as well.) For the sake of presentation, and following in that matter the quasi-totality of the literature on that subject, we will consider the producer and its retail network as a unique vertical structure; we will first focus on the internal organization of such a vertical structure, and then analyze the interaction between several of them. This approach is not totally neutral. In particular, it tends to identify the "brand name" of a good with its producer rather than its distributor. But in many countries there now exist "retail brand names" or "distribution trademarks", whereby a large retail network uses its own name for (some of) the products he carries on, using, one or several producers as subcontractors. We will come back to that issue in Section III and, for the moment, will suppose that the brand name of a product offered by a vertical structure is attached to the corresponding manufacturer; **intra-brand competition** will thus refer to competition between retailers offering the product of a given manufacturer, within a given vertical structure, whereas **inter-brand competition** will refer to the interaction between vertical structures.

We will assume that, within a given vertical structure, the producer can offer its retailers one or several vertical restraints. As we will see, each vertical restraint or combination of vertical restraints can correspond to several distinct motives, and several (combinations of) vertical restraints can be used for a same purpose. Moreover, some motives do call for the joint use of several restraints. Hence, rather than analyzing in sequence the effects of each restraint, we will organize our presentation according to the possible motives of the firms using them. For each motive, we will first examine which restraints or combinations of restraints can be desirable for the firms, and then analyze the consequences of vertical restraints on economic welfare, when used for that motive.

A first line of motives corresponds to co-ordination problems between the producer and the distributors; vertical restraints include a whole set of tools which permit a better mutual control and, so doing, reduce the inefficiencies which could result from a bad co-ordination; consumers may gain from the reduction of these inefficiencies (particularly if it decreases double marginalization problems, or if it eliminates free-rider problems in the provision of customers services), but may as well be worse off (e.g., if it adversely affects the level of quality or differentiation).

A second line of motives relates to the impact of vertical restraints upon inter-brand competition; precisely because vertical restraints affect the coordination between a producer and its retailers, they also affect the overall behaviour of these firms, thereby affecting the interaction between vertical structures. We will first address this issue in a short-run perspective, and then in a long-term perspective.

1. Vertical coordination

This theme is the most frequently analyzed in the economic literature. The emphasis is there placed on coordination problems between a producer and its retailers, within a given vertical structure, rather than on the interaction with other vertical structures. Hence, most of contributions consider the case of a unique producer, dealing with either one or several retailers. 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. In other words, this section can be interpreted as the partial analysis of internal coordination problems, ignoring strategic considerations regarding the interaction between competing vertical structures.

Each vertical structure, considered as a whole, faces a number of decision variables: wholesale

and retail prices, franchise fees, quantity purchased by the distributors, quantity eventually sold to customers, selling efforts, distributors' locations, etc. Neither the producer nor the distributors can directly control all these variables: some are controlled by the producer only, while others are monitored only by the distributors. Also, some decisions only affect the sharing of the pie, while others directly affect the total surplus of the vertical structure. The second type of decision variables are the "targets" that determine the total profits of the vertical structure. The decentralization of these decisions generates externalities (since one firm's decisions affect the other firms' profits), which in turn can cause inefficiencies if they are not correctly taken into account. It is thus natural for the partners to look for some means of co-ordination, and in that respect vertical restraints can help.

We will not list here all types of externalities between upstream and downstream decisions, but will rather focus on the two most frequently quoted, and see how adequately chosen provisions can correct them. We will then discuss, in each case, the impact on consumer surplus and total welfare.

a. Retail prices

Double marginalization has been the first coordination problem formally analyzed (Spengler (1950)) and refers to situations where both producer and distributor enjoy some market power. In such situations, they each add a mark-up to their costs, resulting in a "double" mark-up and too high prices. The coordination problem comes from the fact that each firm, when setting its own price (the wholesale price for the producer, the retail price for the distributor), does not take into account the effect of this price on the other firm's profit. For instance, when considering an increase of the retail price, the distributor trades off increasing its margin against decreasing the quantity, but "forgets" that reducing the quantity also adversely affects the producer's profit. Such externality is likely to lead to a final price above the level which would maximize the aggregate profits of both the producer and the distributor.

Firms can use various provisions to solve this coordination problem. The most obvious solution consists in "dictating" the retail price through resale price maintenance (a price ceiling would actually suffice here) and to set the wholesale price so as to achieve the desired sharing of the profits. This however will only be feasible if in case of disagreement the manufacturer and the court can observe the effective retail price. Alternatively, the producer can monitor the quantity sold by the retailer: imposing a minimal quota is here equivalent to a price ceiling.

If retail prices either are not verifiable or too costly to verify, alternative solutions include nonlinear tariffs. Minimal quotas on quantities bought (an extreme form of nonlinear tariff), for example, may be a good substitute for minimal quotas on sales. Smoother tariff, such as simple two-part tariffs (a wholesale price plus a franchise fee) could also be as effective: the franchise fee can then be used to distribute the profits between the producer and the distributor, eliminating 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 intra-brand competition among distributors, thereby eliminating the double marginalization problem through a reduction of the retail mark-up.

Different restraints (resale price maintenance, quantity quotas, or nonlinear tariffs) thus allow a manufacturer and its distributors to solve the double marginalization problem. These vertical restraints hence appear as substitute instruments for a better efficiency. It should be stressed that, since double marginalization problems generate too high prices, any vertical restraint used for the sole purpose of eliminating this problem actually leads to lower prices, and thus benefits both the firms <u>and</u> the consumers --and thus, *a fortiori*, increases total surplus. Article 85(1) should thus not apply to practices that are solely used for that purpose. (As we will see, however, a same restraint can be used for different purposes, some of which being less desirable from consumers' perspective.)

Arrangements such as two-part tariffs and resale price maintenance, that appear as subtitutes in the above analysis, make however very different uses of distributors' possible better knowledge of local

particularities of cost and demand conditions. Setting an upper bound on the retail price, for example, will not allow the distributor to adjust its price to positive shocks on cost and demand.

Setting a wholesale price just equal to the marginal cost of production and using a franchise fee to recover the profits, in constrast, let the distributor free to adjust its retail price. It moreover gives the distributor the right incentives, by making it the residual claimant of joint profits: at the margin, the distributor perceives all changes in total profits caused by a change in the retail price; the distributor will thus always choose the retail price that maximizes joint profits. Whenever the distributor has a better knowledge of the final demand or retail cost, two-part tariffs will thus generate better retail prices (from the point of view of joint profits) than resale price maintenance. Note, however, that the manufacturer's lack of information also limit its ability to correctly set the terms of two-part tariffs. In particular, making the distributor the residual claimant of joint profits, also makes the distributor bear all the risks associated with shocks on demand and retail costs. Hence, setting the franchise fee at an "average" level of the expected profits may not be accepted by risk-averse distributors, and may also lead the manufacturer to loose profitable markets adversely affected by such shocks on demand or costs. The manufacturer may then have to lower the amount of the franchise fee, and may prefer to rely again on the wholesale price (at least partially) to recover part of the profits --and thus two-part tariffs do not solve totally double marginalization problems.

b. Distributors' services

Distributors provide a range of services that affect the demand for the goods that they are offering: whether these efforts consist in providing free delivery, pre-sale information and advice to potential customers, in increasing the number of salespersons or cashiers to reduce waiting times, in enhancing the organization of shelves or offering a bigger show-room, after-sale services, parking facilities, etc., all these services tend to attract more consumers and may play a key role in the marketing success of some products.

These efforts generate both vertical externalities, between the manufacturer and its distributors, and horizontal externalities between distributors. An important distinction lies in the degree of appropriability of these efforts, both by the providers and by other actors (manufacturer, distributors) in the same vertical structure: giving pre-sale advice can for example give rise to free-rider problems, whereas an increase in the number of cashiers is unlikely to benefit other distributors. The existence of vertical or horizontal externalities prevents a distributor from getting the full benefits from the services it provides and results *in fine* in an underprovision of such services. We analyze this issue first in the context of a unique distributor (thus focusing on vertical externalities) and then in a multi-distributors context.

i. The single-distributor case

In the absence of any specific contract, when choosing its level of effort the distributor considers its own profits, not aggregate profits. But if the manufacturer sets its wholesale price at a higher level than its marginal cost (which will typically be the case in the absence of any specific contract), he gains from any increase in the final demand resulting from the distributor's higher efforts. Hence the distributor, by not taking this increase of the upstream profits, is likely not only to charge too high prices, but also to provide too little effort.[12]

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[12] This intuition is only correct *caeteris 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.

To solve this double coordination problem, the manufacturer can first choose to monitor the distributor's behavior, for example by both setting a price ceiling and requiring a minimal level of effort. If this is not feasible, for example if the distributor's effort is not observable or verifiable by third parties, then a two-part tariff can be as effective: charging a wholesale price equal to the marginal cost of production 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 level of effort and the price that maximize these joint profits. The franchise fee can then be adjusted so as to achieve the desired sharing of the profits.

Note that firms and consumers may disagree on the optimal amount of effort or retail services or, more precisely, on the right mix between retail services and prices. An increase in the level of effort (together with an increase in the retail price) may well increase profits and at the same time reduce consumer surplus and even total welfare: the reason is that firms are interested in the additional consumers they can attract through such effort increase (that is, they are interested in marginal consumers), and thus tend to neglect the impact of their decisions on infra-marginal consumers. If for example marginal consumers are willing to pay more to benefit from more services whereas infra-marginal consumers would prefer to have lower services and prices, than it may be in the joint interest of the manufacturer and of the distributor to increase the level of effort (and the retail price) even though this hurts the majority of consumers and decreases total welfare. This divergence between the objectives of the firms and the objective of the consumers is likely to be important when the vertical structure enjoys a substantial market power. When it is the case, restraints that allow the firms to achieve a better coordination in the choice of effort and price may actually lead to a decrease in consumer surplus, and may even reduce total surplus if the divergence is strong enough. In contrast, if consumers have replacement solutions increasing retail efforts and prices is unlikely to hurt consumers since most of those that could be hurt would instead turn to their 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 also benefit consumers, and thus, *a fortiori*, to increase total surplus.

ii. Intra-brand competition among distributors

In contrast with the pure case of double marginalization, introducing intra-brand competition between distributors does not solve the double coordination problem, but only changes its nature. The reason is that, as already mentioned, the firms' optimal trade-off between retail prices and services usually differs from the consumers' most desired one, and intra-brand competition pushes the distributors towards the consumers' best choices. In other words, intra-brand competition eliminates as before the retail mark-up (which is good both for the manufacturer and consumers), but at the same time, it induces distributors to follow more consumers' preferences when resolving the trade-off between retail services and effort (which seems good for consumers, but maybe not for the manufacturer). As a result, the situation eventually prevailing will generally fail to maximize joint profits. However, from the welfare point of view, this situation may actually be, depending upon the circumstances, either better of worse than the joint-profit maximization situation (see Scherer (1983), Comanor (1985) and Caillaud-Rey (1987)): the reason there is that although intra-brand competition leads distributors to follow closely consumers' preferences, it also induces a reaction from the manufacturer, who will set the wholesale price so as to maximize its own profits; and the indirect effect of downstream intra-brand competition on the upstream price, i.e. the change it induces on the manufacturer's behavior, may more than offset the benefits from distributors' better care for consumer preferences.

Here again the manufacturer can achieve joint-profit maximization through various vertical restraints, for example by directly monitoring both prices and levels of services. Resale price maintenance, this time in the form of price floors, is actually sufficient, since (together with the determination of the wholesale price) it allows the manufacturer to control not only the retail price, but

also the retail margin. The retail price being fixed, intra-brand competition will then induce distributors to offer as much services as compatible with the margin set by the manufactuer: setting the retail price to the (joint) profit-maximizing level and a leaving a retail margin just sufficient to cover the costs of the desired level of services will thus lead to the best possible outcome for the manufacturer. Yet another solution could consist in assigning an exclusive territory to each distributor and to use as above a two-part tariff, making the distributor the residual claimant of the joint profits.

iii. Comments

Several types of vertical restraints again allow the manufacturer and the distributor(s) to achieve joint-profit maximization. However, and in sharp contrast with the case of pure double marginalization, solving vertical coordination problems is not necessarily socially desirable, particularly if the vertical structure enjoys a substantial market power, in which case the divergence between the marginal consumers' and the inframarginal consumers' willingness to pay for services may be important.[13]

When distributors' services are subject to *free-riding*, vertical restraints can still be used to get rid of the free-riding problem and again achieve joint-profit maximization (see for example Mathewson-Winter (1984)). Moreover, in such situations, intra-brand competition among distributors is likely to generate too little effort, not only from the firms' point of view, but also from the consumers' point of view; hence in such situations vertical restraints are likely to be both privately and socially desirable.

c. *Other coordination problems*

A distributor usually distributes several goods at the same time. Hence if the wholesale price for one of the manufacturer's products is higher than the (marginal) cost of that product, a distributor may be induced to favor the sales of another product. From the point of view of the vertical structure, however, this introduces a distortion in the mix of products and reduces total profits. This distortion again vanishes if the manufacturer uses a two-part tariff of the form (franchise fee,wholesale price equal to marginal cost) or royalties fees (based on the total sales of all products), or through exclusive dealing arrangements (if the other products are from a rival producer).

Some of the manufacturers' choices also indirectly affect their distributors' profits: this is for example certainly the case for decisions regarding either nation-wide advertising campaigns or product quality. There again, in the absence of specific arrangements a simple linear price is likely to generate vertical externalities and to fail to achieve joint-profit maximization whereas adequately chosen vertical restraints can correct for these externalities and to achieve (or to get closer to) joint-profit maximization.

A related problem concerns profit-sharing. Future streams of profits are often uncertain in the distribution business, particularly for goods that are either seasonal or subject to fashion. As we have seen, several vertical coordination problem can be solved through the use of two-part tariffs, which in effect make the distributors the residual claimants. This solution has thus also for effect to transfer all risks to the distributors, which may not be desirable if distributors are risk-averse. In that case, manufacturers 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 fee) generally induces distributors to depart from joint-profit maximization, but at the same time (at least partially) insures the distributors against the risks attached to these joint profits.

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[13] See Winter (1993) for a detailed analysis of circumstances in which firms' and consumers' objectives diverge, in a situation where retailers' efforts aim at reducing consumers' shopping time. See also Marvel-McCafferty (1984) and Klein-Murphy (1988).

Lastly, distributors must sometimes make specific investments, particularly in the case of selective distribution, exclusive distribution or franchise systems. These specific 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 fiability will likely 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.[14]

The overall conclusion from the literature on vertical coordination problems is pretty much similar to the one that can be drawn from the above analysis of the distributors' choices of effort:

- In all cases, a simple wholesale price fails to achieve a good coordination between the manufacturer and its distributor(s), and thus to guarantee joint-profit maximization.

- Various vertical restraints or combinations of those can then be used to solve the coordination problem, or at least to get closer to joint-profit maximization.

- These vertical restraints benefit the firms and raise their joint profits. They may also benefit consumers and thus increase total welfare, but they do not always do so. In situations where inter-brand competition is weak and the vertical structure thus enjoys a substantial market power, the theoretical analysis alone remains ambiguous regarding the welfare impact of vertical restraints, and a case-by-case study is in order. In contrast, for those goods that are subject to strong inter-brand competition, any vertical restraint that allow a manufacturer and its distributors to achieve a better coordination not only increases their profits but is also likely to increase consumer surplus and even more likely to enhance total welfare.

2. Inter-brand competition

We have focused so far on "internal" coordination problems, within a given vertical structure. We now analyze the impact of vertical restraints on inter-brand competition, that is, on the interaction between competing vertical structures. We first study "short-term" or "static" effects, taking the overall structure (number and general characteristics of vertical structures present in the market) as given and keeping it constant. We then consider "long-term" or "dynamic" effects of vertical restraints on the structure of the market, including entry and exit.

a. Short-term analysis

We focus here on the following type of issues: can vertical restraints be used to maintain or even amplify existing market power ? If yes, what conditions may favor such effects ? It has been argued that vertical restraints can be used either to help maintaining horizontal cartels or to exacerbate market imperfections (at either the upstream or the downstream level); we analyze these two effects in turn.

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14 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).

i. Distribution cartels

Since most vertical restraints eliminate or at least reduce downstream competition, wherever horizontal cartels are explicitly illegal downstream firms may use vertical restraints to circumvent the law and maintain a cartel through "sham vertical agreements" with a pseudo upstream partner. Although this is a trivial misuse of vertical restraints, likely to be banned in most countries, occasional examples still occur from time to time.[15]

ii. Manufacturers' cartels

It has sometimes been argued that vertical restraints can be used to help sustaining a cartel at the upstream level. For example, resale price maintenance has been said to facilitate tacit collusion because: (i) it makes (retail) price cuts easier to detect (in the absence of resale price maintenance, a local divergence in the retail price may be due not only changes in the wholesale price, but also to local shocks on either the retail costs or the consumer demand); (ii) it also makes wholesale price cuts less desirable, since such a price cut at the upstream level could not, supposedly, be passed on to the downstream level. So far, however, none of these arguments has been formally analyzed, accounting in particular for the possibility of hidden renegotiations between a manufacturer and its distributors on both retail and wholesale prices (see Telser (1960) and Posner (1977) for a discussion of these issues).

iii. Competition dampening at the upstream level

Even in the absence of inter-brand tacit collusion, vertical restraints used by a vertical structure may affect the strategic interaction between this vertical structure and rival ones. In other words, because they directly affect the nature of downstream intra-brand competition between distributors, and thus indirectly affect the behavior of the corresponding upstream manufacturer, vertical restraints alter the behavior of the entire vertical structure and thus affect inter-brand competition as well; vertical restraints can actually be used by a given vertical structure precisely to commit itself to behave in a certain way vis-à-vis its rivals. Several works have shown for example that vertical restraints such as exclusive territories, which reduce intra-brand competition within a given distribution network, also reduce inter-brand competition between rival manufacturers, by reducing their incentives to undercut each other.[16]

Consider for example an oligopolistic market where several competing manufacturers distribute their products through distinct retail networks, and can either maintain a strong intra-brand competition within their retail network, or assign exclusive territories to each of their distributors. If a manufacturer opts for intra-brand competition then, assuming perfect Bertrand competition among distributors, the retail price will be equal to the wholesale price plus retail costs, and will thus fully react to any increase in the manufacturer's wholesale price. If instead the manufacturer assigns exclusive territories to its

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15 One recent example concerns Swiss bookstores. In Switzerland, explicit cartels are tolerated but subject to supervision by two regulatory bodies: one in charge of price control, the other in charge of structural issues. German books sold in Switzerland being substantially more expensive than on the other side of the border, the Swiss agency supervising cartel prices started to increase its pressures for lower prices. The bookstore cartel first tried to negotiate a moderate price decrease and then decided to change its structure, using a single intermediary - a Swiss law firm - to handle all trade between German publishers and Swiss bookstores - and resale price maintenance as part of their contract with the intermediary.

16 See for example Rey-Stiglitz (1985, 1995). A similar idea has been formulated by Vickers (1985) and further explored by Bonanno-Vickers (1988) to show that manufacturers may prefer, for strategic purposes, to delegate the marketing of their products to independent distributors. Related ideas have been developed in the marketing literature (see for example McGuire-Staelin (1983)), while other contributions have enriched the delegation model (see for example Gal-Or (1991)).

distributors, they will have more freedom when setting their prices: but then, if the manufacturer increases the wholesale price for its products, the retailers will have to trade-off between preserving their mark-ups (which would require to pass on the price increase to consumers) and preserving their market shares (against other manufacturers' products, which would require to absorb the price increase). As a result, retail prices will in general react only partially to the manufacturer's price increase (so that an increase in the wholesale price will have a smaller effect than before on the final demand for the manufacturer's products). But, more importantly, the retail price of the manufacturer's products will also positively react to increases in the rivals' prices: when facing a weaker competition from rival products and thus a higher residual demand for their own products, retailers will typically respond by raising their own prices. In other words, reducing intra-brand competition, through the use of exclusive territories, not only makes the demand perceived by the manufacturer less sensitive (i.e., less elastic) to its own wholesale price (which tends to generate higher wholesale prices), but it also encourages the manufacturer's rivals to increase their own prices. (In effect, decreasing intra-brand competition allows the manufacturer to commit itself to a friendlier behaviour, to induce higher prices from the rivals.)

Hence, assigning exclusive territories not only affect intra-brand competition (among distributors offering the same product), but also inter-brand competition (among rival manufacturers or rival vertical structures). This argument does not assert that all the vertical restraints that limit intra-brand competition always facilitate manufacturers' collusion. But it tends to suggest that, in markets where inter-brand competition is initially imperfect, vertical restraints can exacerbate existing imperfections and reduce further the degree of inter-brand competition.[17] Also, all vertical restraints may not lead to such competition-dampening effects. Since the key idea is to use vertical restraints to commit oneself to behave in a certain way vis-à-vis rivals, such effect can only be achieved by "delegating" some decision power to distributors: in the previous example, for instance, granting exclusive territories gave more freedom to distributors in the choice of their final prices (in the absence of exclusive territories, retail prices were simply equal to the sum of the manufacturer's price and of retails costs). Vertical restraints such as resale price maintenance, which increase manufacturers' control of their distributors, hence could not be used for that purpose (in the previous example, using resale price maintenance would lead to exactly the same situation as the one that prevails with a strong intra-brand competition - that is, a direct confrontation between the two manufacturers; if moreover intra-brand competition is imperfect - e.g., because retailers are differentiated by their location - then resale price maintenance would lead to a fiercer inter-brand competition).

b. Long-term analysis

In the long run, vertical restraints can also affect the number and characteristics of the active firms in the market, both in the upstream and the downstream stages of the market. We will here distinguish two types of effects: (i) pro-competitive effects, which mainly relate to the incentives to enter a market, and: (ii) anti-competitive effects, which essentially relate to entry barriers.

i. Entry stimulation

So far the discussion has stressed that vertical restraints can increase existing manufacturers' and distributors' profits, either by enhancing vertical coordination between a manufacturer and its distributors --in which case they may also benefit consumers-- or by maintaining horizontal upstream or downstream cartels, or by simply reducing even further imperfections in inter-brand competition --in which case they increase profits but reduce, in the short run, consumer surplus and total welfare. But these positive effects of vertical restraints on incumbents' profits mean that, in a longer-term

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[17] The distortions induced by the introduction of exclusive territories or other types of restraints are likely to become become negligible in the case of strong upstream competition (e.g., if there exist several close substitutes).

perspective, potential entrants can anticipate larger profits and thus have higher incentives to enter a market.

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 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 however that these long-run beneficial effects exist, whether the expected increase in profits comes from enhanced vertical coordination and better efficiency, or from collusion sustainability or short-term competition-dampening effects. 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 inter-brand 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).*[18]

ii. Market foreclosure and entry barriers

In some circumstances, vertical restraints may be used to foreclose market access and prevent the entry of potential efficient competitors. One possible strategy might be to sign-up available distributors into exclusive dealing arrangements, thereby forcing potential new suppliers to set-up their own distribution systems. If there are large economies of scope or scale in the distribution sector, these exclusive arrangements would raise the entry cost of potential rivals: if for example the manufacturer is distributing its products through retailers who could also distribute the products of a potential competing manufacturer, and if there are synergies from distributing both lines of products, a potential competitor entering the market could have low retailing costs; exclusive dealing provisions would rule this out and thus force a potential competitor to distribute its products in a less efficient way - and the increased distribution costs could deter entry.

A similar entry barrier might be created if entry at the downstream level is difficult and costly, e.g. if there is a limited supply of retailers, at least of comparable quality, or a scarcity of comparably good retail locations. Then again, tying-up the best retailers or locations through long-term exclusive dealing provisions would increase distribution costs for newcomers and could thus rule out entry from a potential competitor. (If entry requires a minimal scale, it might actually be sufficient to sign up a "minority block").

These strategies are part of more general "raising rivals' costs strategies" which have been informally explored in the U.S. institutional context by Krattenmaker-Salop (1986). Such strategies may be used against actual competitors, to force them out of the market or at least substantially reduce their market share, as well as against potential ones, to prevent them to enter the market or at least to delay their entry. Exclusive agreements may of course hurt retailers (who may prefer to carry both lines of products, and may also eventually face increased competition if entry does occur), but they can be compensated for this risk by a share of the extra profits generated so long as entry is successfully deterred.

A formal analysis of these strategies has been proposed by Comanor and Frech (1985) and then

18 The analysis would here be somewhat similar to the analysis of the impact of product market competition on R&D, growth and development - see the literature on R&D races and on endogenous growth. Aghion, Dewatripont and Rey (1995) stresses that (short-run) competition can also have positive long-term effects by acting as a discipline device on firms' behaviors.

developed by Mathewson and Winter (1987) and Schwartz (1987), who have recognized the role of incumbent manufacturers' competition for distributors. More recently, Bernheim and Whinston (1992) have further extended the analysis by considering larger class of contracts (previous works had focused on linear wholesale tariffs). They show that exclusive contracts can again be used to foreclosure markets, except if vertical arrangements allow upstream and downstream firms to achieve perfect coordination.[19]

The role of exclusive provisions as entry deterrent has long been contested for the following reason: even assuming that exclusive dealing provisions can effectively deter the entry of potential manufacturers, why would distributors agree with such arrangements, thereby foregoing opportunities to deal with more efficient suppliers and to generate more competition among their suppliers ? A first answer has been provided by Aghion and Bolton (1987), who have pointed out that incumbent manufacturers can use part of the extra profits so generated to "bribe" the distributors into the exclusive agreements. In Aghion and Bolton, this is achieved through a provision for liquidation damages, according to which the distributor has to pay a certain amount to the incumbent manufacturer if it turns to an alternate supplier. Then, such potential alternate suppliers have to compensate the distributor, for at least the same amount, in order to effectively enter, so that the liquidation damages are eventually supported by the entrant. If the entrant costs are perfectly known to the incumbents, then they can adjust the amount of the liquidation damages so as to extract the full surplus of the entrant, and entry will thus occur whenever the entrant is more efficient. However, if the entrant's cost and profitability are uncertain, then the amount of liquidation damages will be optimally set at an average level, resulting in inefficient entry deterrence if the entrant's cost advantage is not large enough: entry will thus occur less often but, whenever it occurs, the joint profits of the two incumbent firms will increase, through the liquidation damages eventually paid by the entrant. (This increase in the joint profits of the two incumbent firms can *ex ante* be shared between them through an adjustment of the wholesale price.)

More recently, Rasmusen, Ramseyer and Wiley (1991) and Comanor and Rey (1994) have shown that exclusive dealing provisions can be used to deter the entry of more efficient potential competitors, even in the absence of "rent-extraction" from these potential entrants. The argument of Rasmusen, Ramseyer and Wiley relies on a poor coordination among distributors and on the assumption that entry must occur with a minimal scale to be viable. They show that in such a case incumbent suppliers can "bribe" a sufficiently large number of distributors into exclusive arrangements (ruling out viable entry) by sharing with them the extra rents that they can gain from dealing with the remaining distributors. Comanor and Rey's argument relies instead on the idea that the entry of a new competitor at one stage (either the upstream or the downstream stage) not only introduces or reinforces competition at that stage, but also triggers of reinforces competition in the industry as a whole, and may thus result in a decrease in the joint profits of the incumbent firms. Whenever this is the case, incumbents have an incentive to prevent entry in order to protect their initial rents.

Other types of vertical restraints can be used to deter entry. Generally speaking, and as already noted, vertical restraints modify the partners' attitude, in particular towards their competitors; hence incumbent firms can for instance use these restraints to commit themselves to a tough attitude in the event of entry. For example, it has been argued that long-term exclusive dealing provisions, which tie distributors to a given brand, induce then to engage in fiercer competition if competing products appear.

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19 In the absence of agency problems, or if vertical contracts can circumvent all agency problems between a manufacturer and its distributors, then manufacturers' competition to sign up distributors into exclusive agreements would result in having the most efficient supplier winning the competition, or no exclusive agreements if it is more efficient to have both producers as active suppliers. If vertical contracts cannot eliminate all coordination/agency problems (e.g., if wholesale tariffs are restricted to linear pricing rules, generating double marginalization problems), then there is room for exclusionary effects and manufacturers' competition for distributors can still lead to inefficient exclusive agreements.

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 manufacturer might be reluctant to engage in a price war, which would also affect neighbours areas; in contrast, an independent retailer with an exclusive right on this particular area would not take into account the impact on the local price cut on neighbouring areas, and thus would be likely to engage in a tougher competition with the local entrant (see Rey-Stiglitz (1985) for a formalization of this idea).

Of course, all these effects are clearly anticompetitive and thus have socially inefficient consequences, particularly if contracts cover a long period.

Market foreclosure and entry deterrence are central issues in the contexts of development and international trade. In the context of trade liberalization, incumbents are mainly domestic firms and new-comers are more likely to be of foreign origin. Removing tariff barriers may then not be very effective if incumbent domestic firms can use exclusive agreements to foreclose their markets and deter entry. A laxist competition policy may even serve, in that respect, as a non-tariff barrier.

Similarly, developing countries are often characterized by a weak inter-brand competition, dominated by a few firms or cartels with strong market power. There again, these dominant actors can use vertical restraints as exclusionary weapons to protect themselves and infringe competition and economic development, at the cost of consumer welfare.

V. IMPLICATIONS FOR COMPETITION POLICY TOWARDS VERTICAL RESTRAINTS

This analysis shows that vertical restraints can be used in various ways to increase manufacturers and distributors' profits. In some instances, they also enhance economic efficiency, consumer surplus and thus total welfare whereas in other instances, they may hurt consumers and even reduce total welfare. We now derive the policy implications of this analysis.

The first lesson that can be drawn is that the nature of a restraint does not allow by itself to predict whether it will always have nice or bad effects on economic efficiency and welfare: indeed, a same restriction can be desirable in some cases and undesirable in other cases, depending on the context and the needs that it fulfills, or contribute to fulfill. Resale price maintenance, for example, may be beneficial to consumers if, by setting a price ceiling, it is used to avoid double marginalization problems. Price floors can also have desirable consequences if used to fight free-rider problems. In contrast, if resale price maintenance is primarily used to facilitate horizontal tacit collusion, then it will certainly be socially undesirable. Likewise, exclusive territories can also contribute to economic efficiency if used to fight free-rider problems, but can have a negative impact on social welfare if they are mostly assigned to reduce inter-brand competition between incumbent producers or to prevent entry of more efficient potential suppliers.

Different vertical restraints can moreover constitute alternate and equivalent solutions to a given problem, and still have quite opposite properties in other contexts. Resale price maintenance and territorial protection, for example, can both be used as an effective instrument to fight free-riding, but the former can also be used to fight double marginalization problems, whereas the latter only exacerbate such problems.

The above analysis shows that the *per se* legality (or illegality) of a given restraint cannot be justified on the grounds that this restraint is always good or always bad. (*Per se* rules may however be desirable if for example they significantly reduce transaction cost and legal uncertainty, as compared with a case-by-case treatment by courts or competition authorities). However, this analysis does not simply stress the complexity of the evaluation of the effects of vertical restraints; it also identifies a few general ideas that may provide a basis for more specific guidelines. We first stress the role of inter-

brand competition, and then focus on four common types of vertical restraints: resale price maintenance, exclusive territories, exclusive agreements and tie-ins.

1. Inter-brand versus intra-brand competition

Most of the harmful effects of vertical restraints that have been discussed above critically depend on the structure of the market and more particularly on the degree of competition at the upstream and downstream stages of the market. When inter-brand competition is strong, that is, when there is strong competition between independent manufacturer-distributor(s) structures, vertical restraints are less likely to reduce this competition, and even if they do they will only have a limited effect. Similarly, in markets with strong inter-brand competition, decisions that maximize profits are likely to increase also consumer surplus and overall economic efficiency.

Consider first the vertical coordination arguments, concerning intra-brand relationships between a manufacturer and its distributor(s) *within* a given vertical structure. For each coordination problem, the structure analysis is the same: in the absence of any specific arrangement or vertical restraint, simple linear tariffs lead firms to adopt decisions that do not maximize their joint profits; various vertical restraints or combination of those can then restore joint profit maximization, and achieve the desired sharing of that pie. Hence, to evaluate the impact of vertical restraints, it suffices to assess whether joint profit maximization also generates a higher consumer surplus or at least a higher total surplus, as compared with the initial situation of poorer vertical coordination. If the vertical structure faces strong competition, then those decisions that increase the profits of this structure are likely to also benefit consumers and thus total welfare. Consider for example the decisions regarding prices and the amount or nature of distribution services. Enhancing coordination in those decisions might in some instances lead to increases in both prices and services, allowing firms to increase their profits by attracting more marginal consumers, while at the same time hurting other consumers and, as a consequence, reducing total welfare: this can occur when infra-marginal consumers are less interested in the additional services that are being provided, and would thus prefer to pay less for less services. However, this is more unlikely to occur in the case of strong inter-brand competition, since in that case those infra-marginal consumers will have alternatives close to what was initially offered by the vertical structure.

Consider now the second line of argument, according to which vertical restraints might serve to facilitate tacit collusion, either at the downstream stage (distribution cartel) or the upstream stage (production cartel) of the market. Such a risk is again much lower in markets where many rival brands or vertical structures are active and offer close substitutes, or if entry is relatively easy in the market stage where collusion might otherwise occur. This risk seems for example rather small when vertical restraints are employed by a small manufacturer trying to introduce his products into a market with many existing, competing suppliers.[20] Similarly, as already noted, the argument that vertical restraints might be used to reduce inter-brand competition between existing vertical structures (competition-dampening effects) build on previously imperfect competition. For example, consider the possibility that manufacturers try to reduce inter-brand competition by granting exclusive territories to their retailers. This may occur if so doing reduces the elasticity of the demand perceived upstream. But if

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[20] Even if all vertical structures adopt restraints to reach a better vertical coordination, there is little threat of collusion being facilitated in markets with strong competition between vertical structures. Resale price maintenance or territorial protection may for example allow the distributors of a given brand to coordinate the retail prices for that brand, but this does not by itself imply collusion between competing brands. On the contrary, a better intrabrand coordination (even in prices) may in fact reinforces the competitiveness of the vertical structures present in the market, and thus benefit consumers and economic efficiency.

inter-brand competition is strong, then the demand perceived by the manufacturers would be very elastic in all cases: it would be so in the absence of vertical restraints, since a unilateral increase in the price of one brand would lead consumers to switch to competing brands, and would for the same reason remain high even if exclusive territories were used to eliminate intra-brand competition. Hence the possible strategic effect attached to the use of exclusive territories, which may still exist, is likely to be small. Lastly, the argument that vertical restraints might reduce efficiency by increasing barriers to entry, and thus increase or preserve the exercise of market power, becomes also less convincing when the vertical structure faces substantial competition from other brands and retailers in unconcentrated markets.

In contrast, whenever inter-brand competition is weak, the impact of vertical restraints becomes much more ambiguous: on the one hand, solving vertical coordination problems may increase the joint profits of the manufacturer and its distributors, but at the expense of consumers and economic welfare; on the other hand, the risk becomes larger that some restraints might be used not to improve intra-brand coordination but rather to facilitate collusion, either downstream (distribution cartels) or upstream (production cartels). Moreover, it may be very difficult to distinguish between these various possible effects (how could a court assess the impact of a joint increase in retail prices and services on infra-marginal consumers ?).

Hence, in order to evaluate the effects of vertical restraints on economic efficiency, it is necessary to first consider the structure of the supply both of upstream manufacturers and of retail services: do manufacturers and retailers supply sufficiently close substitutes to prevent or limit the exercise of market power? What is the structure and competitiveness of upstream supply, and what is the structure and competitiveness of the downstream supply of retail services ? Note that the analysis of the market might start with a look at the market share of the vertical structure under scrutiny, but this may not be enough. In a concentrated market even the restraints used by a brand with a small share may contribute importantly to limit entry. As a somewhat unrealistic but illustrative example, suppose that all but one desirable retail location in each relevant area of the market is controlled (e.g., through ownership tie) by the small number of other upstream suppliers in the market; then if the small manufacturer gains control of the remaining locations, e.g. through exclusive dealing provisions, these restraints may prevent any potential entrant from being an effective competitor, even though the restraints used by this particular manufacturer affect only a small share of the market.[21] Thus the overall concentration of the market matters, as well as the share of the particular vertical structure under scrutiny. [22]

We now turn to the policy implications for resale price maintenance, exclusive territories, exclusive agreements and tie-ins. For each type of restraint, we will discuss the application of Article 85 in the lights of the effects presented above: effects on vertical coordination (on prices and retail services), short-term effects on upstream and downstream competition, and long-term effects on inter-brand competition.

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21 A potential entrant might however succeed by acquiring distribution rights from an existing supplier. If the entrant is more efficient than existing suppliers, and if some existing ones are only marginally profitable, such a purchase could be mutually profitable. See Krattenmaker and Salop (1986) for a discussion of some of these issues.

22 The analysis should also consider the dynamics of market structure. Is the market expanding rapidly and are new suppliers succeeding - which would suggest that entry barriers are low ? The positive effects of vertical restraints are likely to be greatest in such growing markets, particularly if used by new-comers.

2. Exclusive territories

i. Vertical coordination

Coordination problems appear in many price and nonprice dimensions. Regarding price coordination, the main issue is to avoid double marginalization problems. But assigning exclusive territories to distributors only reinforces such double marginalization problems, and thus one should not expect territorial restrictions to be used to fight such problems. If distributors have a large bargaining power over their suppliers, however, then they may insist in having territorial restrictions in order to accept to carry on a given manufacturer's products. Such use of territorial restrictions may increase distributors' profits, but at the expense of consumer surplus and, if their demand is elastic, at the expense as well of the manufacturer. Article 85(1) should thus apply, and furthermore, such use could not be exempted under Artilce 85(3).

Territorial restrictions may however have desirale effects when used to achieve a better coordination on retail services. In particular, for services such as pre-sale advice, retailers who attract consumers with a "no service, low price" strategy may free-ride on service providers. If the provision of such services cannot be directly compensated by the manufacturer, then free-riding is likely to lead to underprovision of these services, not only from the point of view of the firms, but also from the point of via consumers and of total welfare. When this is the case, it is desirable to encourage those vertical restraints that may eliminate or at least reduce the scope for free-riding. This is clearly the case of territorial restrictions (particularly in their strongest form), which ensure that service providers that they will keep their customers and thus get back the benefits (either in term of larger quantities sold or of higher prices) of the services they offer.[23]

Even in the absence of free-riding, a manufacturer may want to assign exclusive territories to better monitor retail services, and in particular, to favor those services that attract marginal consumers. However, improving coordination then does not necessarily increase consumer surplus and total welfare. Article 85(1) may thus have to be applied, when territorial restrictions leads to situations which increase the manufacturers' and distributors' profits but reduce consumer surplus. Moreover, Article 85(3) cannot be applied in such instances, since consumer surplus is then reduced. In contrast, whenever there is a strong inter-brand competition, it is likely that allowing for a better vertical coordination on retail prices and services benefit not only the firms, but consumers too.

Lastly, let us mention that in some instances, rival firms may suffer from the use of territorial restrictions by a given vertical structure. This may be the case of free-riders, but also of competing brands whose profits decrease. Even if this decrease in profits exceeds the gain in profits of the first structure and the increase in consumer surplus (in which case total surplus decreases and Article 85(1) may apply), however, Article 85(3) should be called in.

To summarize this discussion, exclusive territories should fall under Article 85(1) with no exemption, whenever they only serve to maintain the market power of large distributors. If instead coordination concerns more the adequate provision of retail services, then territorial restrictions are desirable if the risk of free-riding is important and/or inter-brand competition is strong, but has more ambiguously desirable properties otherwise.

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[23] The fact that retail services are potentially subject to free-riding does not by itself suffice to assert the desirability of vertical restraints: since vertical restraints may also have costs, their use must be compared with other means of control of the provision of such services. (In France, for example, Sony did not opt for selective or exclusive distribution systems, or other type of vertical restraint, but instead defined a catalog of compensations (in the form of discounts) for each type of relevant retail service (pre-sale advice, after-sale and repair service, etc.).

ii. Positive effects on inter-brand competition

To demonstrate the economic efficiency of exclusive territories, the U.S. Supreme Court emphasized in its *Sylvania* decision their desirable impacts on inter-brand competition in the long run:

"Vertical restrictions reduce intra-brand competition by limiting the number of sellers of a particular product competing for the business of a given group of buyers....Vertical restrictions promote inter-brand competition by allowing the manufacturer to achieve certain efficiencies in the distribution of his products. These "redeeming virtues" are implicit in every decision sustaining vertical restrictions under the rule of reason. Economists have identified a number of ways in which manufacturers can use such restrictions to compete more effectively against other manufacturers. For example, new manufacturers and manufacturers entering new markets can use the restrictions in order to induce competent and aggressive retailers to make the kind of investment of capital and labor that is often required in the distribution of products unknown to the consumers".[24]

The Court thus acknowledges that exclusive territories reduce intra-brand competition, but advocates for a rule of reason because of the possible benefits of these restrictions on inter-brand competition. This is consistent with the previous economic analysis, which stresses that vertical restraints can encourage entry and promote inter-brand competition because, by allowing greater efficiency to be achieved or even by merely facilitating rising profits in the short-run, they can attract more entrants. This argument may be particularly important when large investments need to be made to enter the market

iii. Negative effects on inter-brand competition

The previous discussion has identified two possible types of negative effects of vertical restraints on inter-brand competition, short-term ones and long-term ones.

In the short run, vertical restraints can be used to facilitate horizontal collusion within existing cartels ("type A" effects in the following) or to dampen inter-brand competition ("type B") among rivals. In the long run, vertical restraints can be used by incumbent firms to deter entry, by committing themselves to a tougher response in the event of entry ("type C" effects), or to foreclose markets by raising rivals' costs ("type D" effects). The last type of effect is usually attached to long-term exclusive dealing provisions, so we will restrict attention here to effects of type "A", "B" and "C".

Regarding type "A" effects, territorial restrictions could indeed be used to merely maintain a downstream cartel, and any such use should clearly fall under Article 85(1) with no exemption,. As for types "B" and "C", the logic is the same in the two cases: incumbent firms can use vertical restraints to alter their attitude, not only vis-à-vis their partners, within a given vertical structure, but also vis-à-vis current and potential competitors. Depending on the context, they may use these restraints to commit themselves to respond more cooperatively (in order to dampen competition with existing rivals) or, to the contrary, to respond more aggressively (to prevent the entry of a potential competitor or to force an existing competitor out of the market). These effects thus rely on a strategic use of the **delegation**, to distributors, of certain decisions (and particularly of price decisions).

We have mentioned two examples of such effects. In the first example, a manufacturer may prefer to assign exclusive territories to its distributors in order to give them more freedom in the setting of their retail price (no longer dictated by intra-brand competition) and, by so doing, to make this retail for its own products responsive to rivals' price increases. In the second example, an established

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24 433 U.S. (1977) at 54-55.

manufacturer assigns exclusive territories to independent retailers in order to commit himself to tougher price responses to geographically limited entry. In both instances, the negative impact on inter-brand competition builds on delegating the price decision to independent distributors, or on reinforcing these independent distributors' freedom in the choice of their pricing policy. Article 85(1) should then apply, and no exemption should be granted under Article 85(3).

iv. Comments

Territorial restrictions can thus benefit consumers in various ways. It may help new manufacturers to attract good distributors or foreign manufacturers to enter domestic markets, thereby fostering entry and increasing inter-brand competition. But it may also improve the efficiency with which existing manufacturers and distributors supply their products or services, particularly if inter-brand competition is robust; increases in inter-brand competition need not thus be considered necessary to prove the efficiency benefits of territorial restrictions.

A strong inter-brand competition is a good indicator that the use of territorial restrictions be a partilular manufactuer is likely to be efficiency-enhancing. This is in accordance with Justice White's concurring opinion in the US *Sylvania* case, who argued for distinguishing the *Sylvania* case from the *Schwinn* case by pointing to differences in market shares:[25] Sylvania had an insignificant market share ((1 per cent to 2 per cent, whereas the dominant manufacturer had a 60 per cent to 70 per cent share) and "enjoyed no consumer preference that would allow its retailers to charge a premium over the other brands"; it was a "faltering, if not failing" producer of television sets, whereas Schwinn was "the leading bicycle producer in the Nation", with a national market share of 22.5 per cent.

The evaluation of inter-brand competition, should however not focus solely on the levels of market shares at a given point in time; in particular, it should also take into account changes in market structure over time -- important changes being likely to indicate a stronger form of inter-brand competition. The *Schwinn* decision has been for example much criticized on the ground that while Schwinn's market share was 22.5 percent in 1951, its share had fallen to 12.8 per cent by 1961.[26]

Note that efficiency-enhancing effects can be attached to strict as well as to weak forms of territorial protection. A weak form of restriction is illustrated by Sylvania's location restrictions, which required the retailer to sell from one particular place of business but left him free to sell to any type of customer, including discounters and other non-franchised dealers. Schwinn's customer restrictions were stricter, since they prevented franchised dealers from selling to discounters or other non-franchised dealers.[27] Stronger forms of ("absolute") territorial protection prevent retailers from selling to customers in other territories, while variants of "limited" or "passive" exclusive territories include restraints that allow retailers to accept orders from their territory but prevent them from active marketing, outside this territory.[28]

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25 *Continental TV Inc. v. GTE Sylvania*, 433 U.S. (1977). The main opinion however disagreed: it found the two cases indistinguishable and replaced Schwinn's per se treatment of territorial restrictions by the rule of reason approach.

26 Neale and Goyder (1980, p. 285).

27 In *Sylvania*, Justice White argued for a distinction based on the strictness of territorial restrictions and urged for keeping strict forms such as Schwynn's restrictions *per se* illegal. The main opinion of the Court however in Sylvania did not follow and decided for applying a rule of reason to both types of restrictions.

28 Even when reselling is formally allowed, however, retailers may implicitly agree not to do so in order to maintain low intrabrand competition. In that case, the distinction between the types of restrictions illustrated by the Sylvania and Schwynn cases is more limited. Likewise, the distinction between "absolute" and "limited" territorial protection is unclear when the

The distinction between absolute and passive exclusive territories has been central in the European competition policy towards territorial restrictions.[29] Although the Commission advocated in favor of limited location provisions (because they ensure retailers that their initial investments could be recovered, and give them incentives to exert important efforts) it also argued that stricter territorial restrictions would not qualify for exemption under Article 85(3), in part because they would more completely eliminate intra-brand competition.[30] This calls for two remarks.

First, the above analysis shows that there is no obvious economic argument for establishing a strict borderline between absolute and limited territorial restictions. Strong forms of protection may be temporarily desirable when a manufacturer seeks to enter a new market, whereas even limited protection should be banned when used to facilitate collusion among long-established dominant firms. Even restricting attention to simple rules, it is not obvious that the distinction between absolute and limited protection may be favored against other simple rules, based on specified characteristics of the market.[31]

Second, although Article 85(3) can be applied only if competition is not eliminated for "a substantial part of the products in question", it does not necessarily imply that intra-brand competition must be preerved. Instead, the "products in question" may be interpreted as the market to which belong the manufacturer's goods. If there are many competing brands, eliminating intra-brand competition for one product need not imply a reduction of competition in a substantial part of the market.

3. Resale price maintenance

Contrarily to nonprice restrictions (such as exclusive territories), which are tolerated, to some (variable) extent in most economically developed countries, resale price maintenance (and its related variants) are rather unanimously banned. It is striking to contrast this difference in the attitudes towards price and nonprice restraints with the findings of the above economic analysis. In this analysis, both types of restraints clearly appear to have both positive and negative impacts on economic efficiency, depending on the context and their purposes. In that respect, one can point out that most of the arguments that have been put forward in recent cases to justify territorial restrictions could be used,

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manufacturer assigns very large territories, thereby granting his distributors a quite high level of intrabrand protection.

29 The Commission stressed for example in its *Pronuptia* exemption decision that the location restriction under scrutiny did not prevent customers from choosing where to buy the goods or franchisees from selling to each other. The distinction between "absolute" and "limited" territorial protection has been recalled in all successive franchise cases (Yves Rocher, Computerland, Service Master, CHarles Jourdan, ...) and is crucial in the franchise exemption regulation.

30 The preambule of the franchise block exemption regulation states that "To guarantee that competition cannot be eliminated for a substantial part of the goods which are the subject of the franchise, it is necessary that parallel imports remain possible". Article 5-g also asserts that agreements cannot be exempted under which "the franchisees are obliged not to supply within the Common Market the goods or services which are the subject-matter of the franchise to end users because of their place of residence". As a consequence, the regulation only allows the franchiser to commit himself not to compete with his franchisees, either directly or indirectly (article 2-a.), and to require that franchisees should not compete "actively" in other franchisees' territories (article 2-d.).

31 Being more permissive rules for small firms may for example be more in line with the economic analysis and may also decrease the delays and costs associated with administrative or judicial procedures -- both being especially important for small firms.

word for word, to justify as well resale price maintenance. We will show below that this is in for example the case of most of the arguments given by the U.S. Supreme Court in *GTE Sylvania*, the decision that started applying a rule of reason (rather than *per illegality)* to territorial restrictions.

Let us now review the potential roles of resale price maintenance in the effects discussed above. It will be useful to distinguish between price floors and price ceilings.

i. Vertical coordination

Price ceilings are very useful to fight double marginalization, whereas price floors cannot serve that purpose. Since the elimination of double marginalization benefits consumers as well as firms, Article 85(1) should thus not be applied to either resale price maintenance or price ceilings used to fight double marginalization problems. Note that in some instances, the use of price ceilings by one manufacturer, which solve its double marginalization problem, may actually reduce the profits of rival firms. Nevertheless, even in such instances total surplus is likely to increase, since solving double marginalization problems only enhances inter-brand competition and can only lead to reduce surpa-competitive mark-ups and rents. (In other words, even if rivals' profits are hurt, this is only due to the reduction of elimination of supra-competitive rents, and the gain to consumers then exceeds the loss of profits). Hence, if solving double marginalization was the only possible purpose of resale price maintenance or price ceilings, then one should favor the adoption of these restraints. Note that, like territorial restrictions, distributors enjoying a large market power may insist in having price floors maintained before acepting to carry on one manufacturer's product. Article 85(1) should apply in such instances, and price floors should moreover not be exempted under Article 85(3) in those cases.

Another argument in favor of resale price maintenance, which applies this time to price floors, is that it prevents free-rider problems; more generally, resale price maintenance (either in the form of price ceilings or of price floors) may help manufacturers and distributors to coordinate on the provision of retail services. For services subject to free-riding, resale price maintenance, in the form of price fllors, eliminates price competition but promotes nonprice competition and restores the incentives of service providers. As noted by Klein et Murphy (1988), distributors may still favor services that are less subject to free-riding. It nevertheless remains that resale price maintenance, when used to fight free-riding, has desirable rather than undesirable effects.

However, as for territorial restrictions, in the absence of free-riding improving coordination does not necessarily increase consumer surplus and total welfare. Article 85(1) may thus again have to be applied, when resale price maintenance improves vertical coordination in retail prices and services but reduces consumer surplus.

To summarize this discussion, if vertical coordination primarily concerns prices, then resale price maintenance (in the form of price ceilings) is desirable. If instead coordination concerns more the adequate provision of retail services, then resale price maintenance (in the form of price ceiling if intra-brand competition is weak and in the form of price floors otherwise) is desirable if the risk of free-riding is important and/or inter-brand competition is strong, and has more ambiguously desirable properties otherwise.[32]

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32 It is sometimes argued that resale price maintenance may lead to inefficiencies because it will prevent differences in the retail costs of various distributors (whether these differences result from exogenous local differences, or from differences in the efficiency with which various retailers operate), from being passed on as differences in retail prices. This argument however assumes that the manufacturer imposes a uniform resale price, while in principle he could recognize differences in retail costs and set different, cost-sensitive prices (and would actually be willing to do so in order to maximize profits). Moreover, if for some reason the manufacturer cannot set cost-sensitive prices, and resale price maintenance would cause a significant inefficiency and

ii. Positive effects on inter-brand competition

The argument that the same vertical restraints that limit intra-brand competition and increase incumbents' profits may also have a desirable impact in the long run on inter-brand competition is not limited to non-price vertical restrictions: price restrictions, too, can promote entry and inter-brand competition by increasing the profitability, and perhaps also the efficiency, of a new entrant.

In *Monsanto v. Spray Rite*, the U.S. Supreme Court has actually acknowledged that price and non-price vertical restraints can have very similar economic effects:

"It is precisely in cases in which the manufacturer attempts to further a particular marketing strategy by means of agreements on often costly non-price restrictions that it will have the most interest in the distributors' resale prices. The manufacturer often will want to ensure that its distributors earn sufficient profit to pay for programs such as hiring and training additional salesmen or demonstrating the technical features of the products, and will want to see that "free-riders" do not interfere".[33]

Likewise, in *Business Electronics v. Electronics*, the Court asserted:

"...vertical restraints that do not result in dealer termination, such as the initial granting of an exclusive territory or the requirement that certain services be provided, can be attacked as designed to allow existing dealers to charge higher prices....We cannot avoid this difficulty by invalidating as illegal *per se* only those agreements imposing vertical restraints that contain the word 'price', or that affect the 'prices' charged by dealers....All vertical restraints, including the exclusive territory agreement held not to be *per se* illegal in *GTE Sylvania*, have the potential to allow dealers to increase "prices" and can be characterized as intended to achieve just that".[34]

Nevertheless, the Supreme Court went on and maintained the distinction between the *per se* illegality of price restraints and the rule of reason applied to non-price vertical restraints.[35] Yet it should be stressed that the argument used in the previous section to advocate for exclusive territories also applies, word for word, to resale price maintenance.

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reduce joint profits, then resale price maintenance will simply not be used. See Rey and Tirole (1986b) for an analysis of these issues.

33 465 U.S. 752 (1984) at 762-3.

34 485 U.S. 717 (1988) at 727-728.

35 While the Court recognized that upstream producers using non-price restrictions will be concerned with retail prices, and non-price restrictions often will have the effect of increasing retail prices, the Court was anxious both to protect the doctrine of *GTE Sylvania* that non-price restrictions be judged under the rule of reason and to retain the rule of *per se* illegality for vertical price restrictions. Thus it was necessary to establish what was a vertical price restriction that was *per se* illegal, and what was a vertical non-price restriction (that perhaps affected prices) to be judged under the rule of reason. The *Monsanto* and *Sharp* decisions both addressed this question; the *per se* rule applies only if there is clear evidence of agreement between manufacturer and distributor which "tends to exclude the possibility of independent action" by the two (*Monsanto* decision, 465 U.S. 752 (1984) at 768), and there is agreement about the price or price levels, and not only an agreement (e.g. on a non-price restriction) that might affect price but did not establish that price (*Sharp* decision, 485 U.S. 717 (1988) at 725-6). See the recent discussion of th U.S. competition law and policy towards vertical restraints in OCDE (1994), pp. 190-191, as well as the previous report from the FTC, Overstreet (1983).

iii. Negative effects on inter-brand competition

We focus again on the three types of effects ("A", "B" and "C") identified in the previous section. Regarding type "A" effects, relative to the impact of vertical restraints on tacit collusion and cartels, resale price maintenance and price floors can first have a negative impact when simply used to maintain a distribution cartel. It has moreover been advocated that resale price maintenance could also be used to facilitate upstream tacit collusion, by reducing the manufacturers' incentives to lower wholesale prices. However, as already noted, so far this argument lacks a rigorous treatment, taking into account the possibility of (possibly) hidden renegotiations of retail as well as wholesale prices, as well as empirical evidence.

In the short run, vertical restraints can be used to dampen inter-brand competition ("type B") among rivals. In the long run, vertical restraints can be used by incumbent firms to deter entry, by committing themselves to a tougher response in the event of entry ("type C" effects). As already noted, in the two cases the effects rely on a strategic use of the **delegation** of price decisions to distributors. Such effects can thus be attached to restraints such as exclusive territories, which indeed gives distributors more freedom in the setting of their prices, but not to resale price maintenance, which precisely rules out any freedom in the distributors' choices of prices. (Resale price maintenance can to some extent be seen as the exact contrary of price delegation). Hence, from the standpoint of these two types of effects ("B" and "C"), competition authorities should be less favorable towards territorial restrictions than towards price restrictions.

4. Exclusive agreements

Exclusive agreements encompass both restrictions on the manufacturer (when the agreement gives an exclusive right to a given distributor) and restrictions on the distributor (when the agreement restricts the distributor from dealing with competing products). Since the first type of restriction resembles territoriral restrictions (the "territory" being the entire country, when for example a foreign manufacturer gives an exclusive right to a single importer), we focus here on the second type of restrictions.

Exclusive dealing can be socially as well as privately beneficial when it serves to ensure a minimum level of services at the retailers' level (by preventing retailers to divest their efforts into rival products and encouraging them to contribute more to the success of the manufacturer's products) when it protects the manufacturer's rights in specific investments. On the other hand it can reduce market competition with other brands or retailers when a franchisor uses exclusive contracts to foreclose his market, or to pre-empt interesting outlet locations or prominent franchisees. This latter feature is likely to be most harmful when used by well-established franchisors, and when there is a shortage, at least a transitory one, of possible franchisees -- because of the lack of space, for example, or of the absence of skilled franchisees. It is thus particularly relevant here to distinguish the situation of experienced franchisors long established in a market from the situation of new franchisors or the situation of franchisors attempting to enter new markets. Moreover, since other means exist to ensure a provision of services by the franchisees without risking market foreclosure that raises entry barriers, arguments in favour of exclusive dealing should concentrate on the protection of the franchisor's specific investment.

Several OECD member countries distinguish between whether manufactuerers are well-established in their markets ("major suppliers") or are new entrants. In Canada, Article 77.4.a of the Competition Act allows competition authorities to exempt exclusive dealing provisions, for a reasonable period, when these provisions mainly serve to facilitate the entry of a new firm or of a new product. In its *Bombardier* decision the Restrictive Trade Practices Commission clarified the application of this article of the Competition Act and developed an interesting analytical framework for the evaluation of the relative importance of Bombardier in its market (including Bombardier's market

share, financial strength and record of innovation, the evolution of relative market shares, the availability of other distributors for competing manufacturers, the choice offered to consumers in remote locations ...). In the United States, the decision of the Supreme Court in *Tampa Electric v. Nashville Coal* pointed toward evaluating the internal efficiency and market effects of exclusivity provisions, rather than looking more mechanically only at market shares. The decision, however, provided little guidance about how this analysis should be carried out (recall that the Court simply asserted that affecting 0.77 per cent of the coal market was not significant enough to be considered as a violation of competition regulations). Subsequent decisions have applied such an approach. In the *Beltone Electronics* case, the Federal Trade Commission applied a general analysis of the economic effects in finding acceptable the exclusive dealing provisions of a manufacturer with a 7 to 8 per cent market share. The Commission reached a decision on the grounds that this manufacturer's sales were declining (so that the exclusive dealing arrangement could be interpreted as a way of placing the firm in a good position for a new start), that other distributors were available to competing manufacturers, and that the arrangement aimed to stimulate the distributors' efforts to promote Beltone's products. The Commission, however, did not discuss the possibility that exclusive dealing protected the manufacturer's investments except for citing the need to protect its "investments" in clients that it referred to its distributors.

The standards set in the later 7th Circuit decision in *Roland Machinery Co. v. Dresser Industries, Inc.,* 749 F.2d. 380, 384 (7th Cir. 1984), for determining whether exclusive dealing is anticompetitive also suggest a willingness to use economic reasoning to analyse the competitive effect of exclusive dealing. Judge Posner said that a plaintiff in an exclusive dealing case must prove that the exclusion is "likely to keep at least one significant competitor of the defendant from doing business in a relevant market" and that "the probable (not certain) effect of the exclusion will be to raise prices above (and therefore reduce output below) the competitive level or otherwise injure competition." The second condition, determining whether exclusive dealing is likely to affect prices, involves looking directly at whether exclusive dealing allows increased exercise of market power. The first condition, determining whether a competitor is kept from doing business, is more problematic. Keeping a competitor from doing business is one means by which exclusive dealing might harm competition, particularly if "competitor" is interpreted to include potential entrants as well as firms that have supplied or are supplying the market. Exclusive dealing, however, also could harm competition without preventing either existing suppliers or entrants from doing business; if exclusive dealing provisions raise the costs of some rival suppliers or entrants they may be unable to prevent the increased exercise of market power even though they continue to do business.

The European franchise block exemption regulation allows exclusive dealing provisions, but only in some situations. First, it draws a distinction between those products which are at the core of the franchise agreement, and more secondary products such as accessories or spare parts, and for which exclusive agreements cannot be employed. It does allows exclusivity requirements for other goods or services purchased by the franchisee, provided certain conditions are satisfied; in particular, the exclusivity clause must be necessary for the protection of the franchisor's rights, and it must be impossible to achieve similar goals in different ways, such as by specifying objective quality standards. The exemption regulation therefore does not apply when the franchisee can buy from other suppliers items which could meet reasonable and explicit quality requirements (except, of course, if the goal of the franchise consists exactly in distributing the franchisor's products). In the same spirit, even if the aim of the franchise is the distribution of the franchisor's products, the franchisor cannot prevent his franchisees from buying the franchisor's products from other franchisees or retail outlets (cf. the previous discussion on territorial restrictions).

The European Commission's emphasis in its list of acceptable franchise provisions on the necessity of the exclusive arrangement for the protection of the franchisor's rights is significant. The difference between core products and secondary ones is interesting; in many cases quality and other efficiency arguments will be stronger for products that are the subject-matter of the franchise. It is less clear how consistently this distinction will draw a line between exclusivity arrangements that do and do

not increase efficiency[36]. In particular, where there is little prospect of any effect on market power, exclusivity arrangements could be allowed for a broader range of products without much risk of harming economic efficiency. Similarly, the exclusivity requirements for spare parts or accessories could be interpreted as a tie-in, and could be analysed and accepted as such in some circumstances rather than being automatically ruled out[37]. Also, the effect on economic efficiency of another limitation in the block exemption restriction -- the prohibition on preventing a franchisee from buying the franchisor's products from other franchisees -- is not clear. For example, this prohibition could be used by the franchisor to sustain a non-linear tariff -- such as progressive rebates for large quantities -- in order to give franchisees incentives to promote the franchisor's products, a purpose that could be completely consistent with economic efficiency. It could also be used to improve protection of the franchisor's rights. On the other hand, allowing franchisees to buy from each other does not seem to create substantial risks of reduced inter-brand competition or market foreclosure.

5. Tie-ins

Like all other vertical restraints, tie-ins may be either harmful or beneficial, depending on context. This is reflected in the laws of the various countries, which generally apply a flexible rule of reason. The United States has been one exception, with tying arrangements being considered *per se* illegal. This is somewhat misleading, however, because a number of conditions must be satisfied before the *per se* rule is applied, and under the current standard these conditions involve considerable market analysis. We begin with the definition of a tying arrangement, then comment on the application of the rule of reason.

i. The definition of the tying product

Since tying arrangements require two products, an important legal question, particularly in the United States, has been whether two products were involved in an agreement. This question became particularly important following several decisions, notably *Susser v. Carvel* and *Siegel v. Chicken Delight*, suggesting that the franchisor's brand or trade mark could be a separate tying product. That in turn potentially made any obligation to purchase a product or service from the franchisor a "tied" product. Under some decisions, the selling of an "XYZ" shoe might have been found to be a tying arrangement, since it required buying simultaneously the shoe and its "XYZ" trademark.

The United States courts struggled with this issue for some years. The Supreme Court's decision in *Jefferson Parish*, however, has provided a new test for separate products, the two-market test, that has been widely followed. A considerable virtue of the *Jefferson Parish* approach is that it focuses on tests involving the market consequences of agreements, rather than on drawing distinctions using criteria that may have no close relationship to market outcomes. This test does seem to prevent a finding of separate products and tying arrangements in many situations in which the alleged tie clearly could have no adverse affect on market competition. Under *Jefferson Parish* a product and its trademark could not be two products. On the other hand, the two-market test would seem to make it possible to find that a franchisor's tradename or brand was a product separate from a product or service

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36 It should be noted, however, that while such obligations are stated in Article 3 of the franchise block exemption to be acceptable only "in so far as they are necessary to protect the franchisor's industrial or intellectual property rights or to maintain the common identity and reputation of the franchised network", the non-opposition procedure specified in Article 6 may allow such obligations to be included in acceptable agreements even if they do not meet these conditions, so long as the obligations are not expressly prohibited by Article 5.

37 More generally, obligations covered by these provisions of the franchise block exemption might be analysed as tying arrangements under U.S. law. See the comments below on the relationship between current U.S. treatment of tying and the EC block exemp ion regulation.

that could be used by the franchisee without changing the basic nature of the product or service sold under the trademark, a circumstance in which it might be possible for a tying arrangement to reduce competition by raising entry barriers.

In the case of a business-format franchise, the "way-of-doing-business" can be identified as a distinct product. The Court of Appeal in *Principle v. McDonald's Corp.*, was correct to observe that "McDonald's offers its franchisees a complete method of doing business from the design of the menu board to the amount of catsup on the hamburgers". This "complete method" identifies a product that is both demanded and offered: potential franchisees are interested in acquiring the rights to operate any of several "fast food" franchises, and there are a variety of suppliers including both some bigger competitors (Burger King, etc.) and a competitive fringe. This does not mean, however, that all "ingredients" should necessarily be considered intrinsic parts of the "product". Some products sold by a franchisee, such as soft drinks and hamburgers, may be in separate product markets; if so, requiring a franchisee, for example, to distribute only some specific brand of drinks -- putting aside quality considerations -- clearly looks like a tying arrangement.

Finally, it is interesting that the *Jefferson Parish* two-market test brings U.S. jurisprudence on tying closer to the position of the EC franchise block exemption regulation on the types of products that franchisees may be obligated to purchase from the franchisor. Under the EC regulation, an obligation is permissible that prevents the franchisee from buying elsewhere products or services that compete with those of the franchisor and are the subject-matter of the franchise[38]. Such a product or service and the franchisor's trademark would be unlikely to pass the two-market test. The EC block exemption is much more restrictive about requiring franchisees to buy other goods or services, which in some instances at least would also be more likely to be found separate from the franchise trademark under the two-market test.

ii. Evaluating the effects of a tying arrangement

One of the main arguments against tie-ins involves the possibility that the franchisor has "sufficient economic power with respect to the tying product to appreciably restrain free competition in the market for the tied product"[39]. Tying can indeed leverage market power and be harmful when: (i) the franchisor has some market power in the market of the tying product; and (ii) the franchisor forecloses a non-negligible share of the market for the tied product thereby making entry more difficult.

The first condition on the franchisor's market power for the tying product has been interpreted in various ways, sometimes with a very loose standard. In the United States, a variety of standards were used to determine if there was sufficient economic power over the tying product; some decisions were willing to accept use of a brandname as sufficient evidence of economic power. These standards properly have been replaced, especially in Jefferson Parish, with standards based on the franchisor's market power in the market for the tying product, rather than on only the less well-defined concept of economic power. The threshold level of market power seems however to have been relatively high. In *Jefferson Parish,* for example, the Supreme Court considered that a 30 per cent market share was "insufficient as a basis to infer market power", even though it recognised at the same time that there existed "market imperfections" that allowed the hospital to charge non-competitive prices; it is immediately added in the decision of the Court that "while these factors may generate `market power' in some abstract sense, they do not generate the kind of market power that justifies condemnation of tying"[40].

38 Regulation No. 4087/88, Article 2-3.

39 Northern Pacific Railway Co. v. United States, 356 U.S. 1 (1958) at p. 6.

40 Jefferson Parish Hospital District No. 2 et al v. Hyde, 466 U.S. 2 (1984).

The second condition, which relates to the structure of the market for the tied product, is often missing in the application of the rule of reason to tie-ins. It is very significant, however, for the economic impact of a tying arrangement. Even if the franchisor succeeds in using a significant market power in one market to force his franchisees to buy other goods as well, this may have little impact on competition in the other markets if his franchisees represent only a negligible share of the customers of the other products. Chicken Delight's requirement to buy packing items, for example, may have had only negligible consequences on the competition in the packing industry. In the U.S., application of the *per se* rule against tying does require a showing that a "not insubstantial" amount of commerce is foreclosed in the market for the tied product. Courts, however, often have found the necessary showing satisfied by evidence on the total dollar amount of commerce foreclosed to competitors by the tie, rather than by evidence on the proportion of the market for the tied product or on the economic effect the tie has in the market for the tied product. Several circuits, however, have also required a showing that tying resulted in the actual foreclosure of competition in the market for the tied product, or that there was a substantial danger that the tie would allow the seller to acquire market power in the tied product market[41].

In addition, tie-ins can have efficiency-enhancing effects. One way a tie can enhance efficiency is by preventing inefficient input substitution. This argument, however, does not seem to be much accepted in competition policy jurisprudence as a basis for allowing use of tying provisions.

In the United States, *Siegel v. Chicken Delight, Inc.* provides for another possible efficiency-enhancing use of tie-ins. Rather than requiring any franchise fee or royalties, Chicken Delight used the packing items needed in the franchised business operation as a "counting device" to recover a return proportional to the volume of sales. This counting device worked well for the franchisee: it was simple and avoided requiring franchisees to report sales accurately. The Court of Appeal, however, rejected this argument and, although Chicken Delight's franchisees represented a relatively small share of customers for similar packing, condemned the tying requirement; without franchise fees and royalties, the franchisor did not survive very long after the decision.

Other possible efficiency-enhancing uses of arrangements involve preservation of the franchisor's goodwill and quality reputation. There has been some willingness to consider such uses of ties in both the United States and the EC. In the U.S. in *Mozart v. Mercedes Benz*, a tying arrangement involving parts was found legal, largely on the grounds that it was justified by the benefits of quality control. The EC franchise block exemption allows franchisors to obligate franchisees to purchase from specified sources where necessary to protect the identity and reputation of the network (but only if quality standards cannot be specified).

Whether a tying agreement is in fact necessary to protect quality or otherwise enhance efficiency should be checked carefully in circumstances in which competition might be threatened. The distinction drawn by the Canadian Restrictive Trade Practices Commission between efficiency effects in the joint production of the tying and tied products, on the one hand, and quality arguments used to justify tying arrangements for inputs, on the other hand, seems particularly relevant. It should also be checked that alternative methods do not exist with similar efficiency-enhancing effects, if the market circumstances described above indicate a risk of harm to competition. The EC block exemption allows the designation of suppliers to protect quality only if it is "impracticable" to set objective quality specifications[42]. In another U.S. case, *Metrix v. Daimler Benz*, the same tying arrangement for parts

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41 The 9th Circuit Court, citing Jefferson Parish, found that this last requirement was satisfied by showing a substantial volume of commerce was foreclosed, suggesting a more market-based approach to the latter requirement. For citations to cases see ABA Antitrust Section (2d. ed. 1984, pp. 88-89, and 1988, pp. I-82-84), on which the discussion of U.S. jurisprudence in this paragraph is based.

42 Regulation No. 4087/88, Articles 3-1-a and 3-1-b.

considered in *Mozart* (but applied to a different distributor) was not allowed on the grounds that there were alternative methods available to ensure quality.

6. Vertical agreements and franchising

a. Vertical agreements

Quite often in practice, firms do not use a single restraint but bundle several restraints together in a broader vertical agreement. Standard agreements for example associate exclusive dealing with exclusive territories, and sometimes with no-competition clauses, full-line forcing or other sorts or tie-ins. The above economic analysis has also shown that several vertical restraints may indeed have to be combined together in order to solve a particular coordination problem or to reach a particular objective. For example, exclusive territories can be assigned to distributors in order to prevent free-riding, but so doing also creates or reinforces double marginalization problems, thereby calling for price ceilings or other instruments. Firms may thus have indeed an incentive to use not a single restraint, but rather a bundle of restraints.

It should be emphasized that a combination of restraints may be preferable to a single one, not only for the firms, but also for the consumers. Consider for instance the above free-riding example. In the absence of any restraint, no or insufficient retail services would be provided. Assigning exclusive territories then induces a higher level of services but also a much higher price, and may thus overall adversely affect consumers. In that case, it is only the combination of exclusive territories and price ceilings (or any other equivalent combination) that leads to an outcome that is preferred by consumers.

This example calls for two remarks. First, competition policy may not have to be tougher towards bundled restraints than towards single ones -- in some instances, it should actually develop a more favorable attitude towards bundled restraints. Second, the impact of a given restraint may not be evaluated as such, but only in relation with the other restraints being used; in this example, for instance, resale price maintenance can have desirable effects to limit the double marginalization problems created by the assignment of exclusive territories, but wuold not have such a role in the absence of exclusive territories -- assuming that a sufficiently strong intra-brand competition would then take place.

The bundling of restraints raises the following issue: should competition rules be developed and applied separately for each specific restraint found in each package, or should a specific rule be designed for at least some pre-specified standard packages?

Neither the existence of standard vertical agreements (i.e., standards groups of restraints often combined together), nor the fact that the effect of each particular restraint depends on the other restraints found in the same package, necessarily imply a need to develop specific rules for these standard agreements: instead, one should evaluate the respective merits of applying specific rules to such standard agreements and of using separate rules for each individual restraint. On the one hand, designing specific rules for well-identified packages of restraints may help reducing enforcement costs and reaching correct decisions, taking into account the interaction between the various restraints found in the package. On the other hand, introducing specific regulations has potential disadvantages. It may for example restrict the set of relevant available alternatives and lead firms to choose their vertical arrangements not only for efficiency reasons but also because some of them qualify for specific treatments. The introduction of specific regulations for standard packages may also discourage firms from innovating new relationships. In order to be effective, the number of such specific regulations has to be kept reasonably limited, and thus regulations will be designed only for most common practices. But then, firms may prefer to stick to a given vertical agreement in order to benefit from its specific

treatment, rather than to introduce desirable changes in the vertical agreement. Note furthermore that, if the changes are not introduced, the competition policy will not be adapted, and inertia will certainly be excessive.

b. *Franchising*

Franchise contracts are one particular instance of vertical agreements bundling several restraints together. Although there is no unanimous definition of franchising among the Member countries of the European Union, there is a clear consensus that franchise contracts are centered on the licensing of a brand name. Two types of franchises are sometimes identified: distribution franchises and business format franchises. In both cases trademarks play a key role, but in the latter case the contract must moreover involve a transfer of know-how from the franchisor to the franchisee. The European franchise block exemption regulation focuses on this latter case and identifies a franchise contract as "a package of industrial or intellectual property rights relating to trademarks, trade names, shop signs, utility models, designs, copyrights, know-how or patents which can be exploited for the resale of goods or the provision of services".[43]

Trade-marks or brand-names clearly play an important role in the economic analysis presented in the previous section. In particular, many efficiency-enhancing arguments in favor of vertical restraints are valid mainly when the manufacturer's brand-name is involved. This is particularly true of the arguments concerning the preservation of the manufacturer's "image" or reputation but, more generally speaking, this remark also applies to all the arguments that rely on the promotion of "inter-brand" competition. It should however be noted that trademarks also play a role in the evaluation of market power: although the existence of a well-established trademark need not imply an important market power, it does often signal a substantial market power. In that respect, trademarks have again an important role in the evaluation of the impact and desirability of vertical restraints.

Likewise, the existence of substantial manufacturer's know-how plays an important role in the relationship between this manufacturer and its distributors, and may also play an important role in the rationale and the impact of vertical restraints being used. To analyze this more precisely, we now review the effects discussed in the previous section, in the context of situations where the manufacturer's know-how is important.

i. Vertical coordination

Know-how, as all forms of immaterial investment, is very sensitive to free-riding: in the absence of any protection, once transferred to a third party, this party may use it and even diffuse it at will. Moreover, usual protection instruments, such as patents and intellectual property rights, may not be easy to use in the case of know-how. Training future franchisees to a certain way of conducting business typically goes beyond providing those franchisees with a mere written description of this know-how: it usually involves training sessions, on-going technical, accounting and management assistance, and so on. (See the discussion below.) It may very difficult in practice to directly monitor the use and diffusion of such knowledge, once it has been transferred to the franchisee.

Franchisors' incentives to invest in know-how will in general be insufficient if they cannot realize the full returns generated by this know-how. This issue may be of particular importance when franchisees sell competing products as well as the franchisor's product, or when franchisees open additional outlets that are not part of the franchise network, or terminate the franchise relationship but continue in a similar business.

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43 This quote is incomplete; in particular, the franchise regulation moreover restricts attention to end levels (retailing agreements, as opposed to industrial or wholesale agreements).

Transferring know-how also involves some kind of investment, this time both from the franchisor and the franchisee. Moreover, these investments are relationship-specific and thus loose much or all of their value if the franchise relationship is ended. Hence, if the returns to these investments are not assured, the risk of opportunistic behavior is likely to lead the two parties to an under-provision of such investments.[44] For example, a franchisee will be reluctant to make such specific investments if nothing prevents the franchisor from locating another franchisee next to him once the investment has been sunk.

Again, various provisions can be used to solve these coordination problems. One solution is to stipulate in the contract the amount and nature of know-how and learning involved, and to include property rights attached to the franchisor's know-how. If that is a feasible solution, the existence of know-how does imply a need for specific regulations, but only the application of existing regulations on intellectual property rights. In that respect, it is interesting to note that the definition of know-how adopted in the franchising block exemption regulation is almost identical to the definition adopted in the block exemption for know-how licensing agreements.[45] Also, in the *Maize Seed* decision of the European Court of Justice, the Court refused to depart from the application of general intellectual property rules.[46] Likewise, some of the United State jurisprudence towards vertical restraints is relevant for the U.S. treatment of intellectual property rights and industrial licensing agreements in the U.S.[47]

There are reasons, however, why specific rules might be valuable for franchising where substantial know-how is transferred. As already argued, the know-how transferred within a franchise often is more difficult to describe explicitly than the intellectual property to which general rules are usually applied. Whereas one can for example describe maize seeds with sufficient precision to reproduce these seeds and their expected characteristics, it may be much more complicated to describe with sufficient precision a particular way of conducting a business. Such know-how is usually not communicated only via written documents which can be identified from the beginning, but rather through appropriate training, on-going technical assistance, etc. Hence, while the intellectual property rights set out in the 1984 patent licensing block exemption regulation[48] and the 1989 know-how block exemption regulations[49] may well be appropriate in the case of maize seeds, the same provisions may be less well-suited for the kind of knowledge involved in franchising.

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44 Williamson (1985) and (1989) have extensive discussions of the general implications of relationship-specific investments. See Hart-Moore (1988) and Aghion-Dewatripont-Rey (1994) for a detailed analysis of the role of long-term contracts in restoring efficient incentives to invest in relationship-specific investments.

45 European Economic Community Regulation No. 556/89 on the application of Article 85(3) of the Treaty of Rome to certain categories of know-how licensing agreements, published in Official Journal No. L 66/1, 4th March 1989. In particular, both definitions emphasize the notions of "secret", "substantial" and "identified".

46 Nungesser v. Commission, Case 258/78, (1982) E.C.R. 2015. Exclusive arrangements for the reproduction and the distribution of a new hybrid maize seed were challenged by the European Commission. The firms argued that exclusivity was necessary to introduce the new seeds and thereby to promote competition between those and other seeds, but the Court refused to distinguish breeders' rights from any other kind of intellectual property rights.

47 See for example the discussion in OECD (1989).

48 Commission Regulation No. 2349/84, OJ No. L 219/15, 16 August 1984.

49 Commission Regulation No. 556/89, OJ No. L 66/1, 4 March 1989.

Other instruments than pure intellectual property rights may thus have to be used to protect both parties' specific investments in know-how. On the one hand, exclusive dealing provisions and no-competition clauses prevent franchisees from appropriating the benefits of know-how by distributing competing products or by engaging in similar activities. On the other hand, exclusive territories help ensure that franchisees will earn a return on investments they sink. The agreement may specify investments from one or both parties, that may play the role of "hostages" or "bonding devices" to prevent opportunistic behavior. Note that in the context of franchisinge the contracting parties can indeed use a variety of alternative ways of remunerating the franchisor's know-how -- for example, franchisees' contributions to advertising, paying royalties to the franchisor, or agreements to distribute franchisor's products other than those directly concerned by the franchise agreements. This is a much wider range of potential methods of remuneration than available in many patent or know-how licensing agreements outside of franchising. For all of these reasons, franchise contracts may deserve distinctive treatment.[50]

Lastly, note that the coordination problems described here are similar to free-rider problems and, as such, are likely to lead to insufficient investment from the standpoint of efficiency as well as profits. Hence, provisions that allow for a better coordination in this domain can improve efficiency as well as profits.

ii. Positive effects on inter-brand competition

Franchise agreements can positively affect inter-brand competition in several ways. First, precisely because they increase the incentives to invest in know-how, they promote the entry of innovative technologies. This is clearly the case when provisions protect the franchisor's intellectual property rights by limiting unauthorized use of the know-how. This effect may again be particularly important when the franchisor's know-how concerns his experience in conducting business, a form of knowledge difficult to protect through patents or licensing agreements.

In such cases, provisions that protect know-how may thus have a direct and positive effect on inter-brand competition. This applies to exclusivity provisions that prevent franchisees from unduly appropriating the benefits of the franchisor's know-how, either by using it to distribute competing goods or by engaging, directly or indirectly, in activities similar to those of the franchisor. Provisions that restrict franchisees after the termination of a franchise agreement may serve a similar purpose and thus also have a positive effect on inter-brand competition.

But franchise agreements may also have an indirect effect on inter-brand competition, by increasing the franchisors' returns from their know-how. As already noted, the provisions found in franchise agreements may solve coordination problems regarding prices, quantities, quality, retail services, etc., thereby increasing the surplus generated by the know-how and reinforcing the incentives to invest in know-how. Even if efficiency is not increased, i.e., even if the restrictions found in franchise agreements increase profits but reduce total surplus *ex post*, the increase in profits still contributes to reinforce the *ex ante* incentives to invest in know-how. Although this remark applies to all forms of sunk investments needed to enter a market, it is particularly relevant when the initial investment takes the form of know-how, because of the possible spillovers and positive externalities

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50 At the same time, the difficulty of specifying the know-how may make the rule quite fragile. It is difficult to apply a rule that is appropriate when know-how has been transferred without a precise definition of what constitutes such know-how. For instance, in the Charles Jourdan case, the franchisor sold shoes through several channels, including franchised retailers and "approved" retailers: approved retailers received a limited amount of information about fashion trends, whereas franchisees also got advice on management, decoration, advertising, etc. Although the know-how involved in "approved dealership" arrangements seemed much more limited than in franchise agreements, some have argued that the block exemption for franchising should also apply to such arrangements.

often generated by innovation and know-how.[51]

Hence, when the effects on the incentives to invest in know-how are considered, provisions that allow the franchisor to more completely capture consumer surplus, or increase profits but reduce consumer surplus, may have social benefits even if they do not increase efficiency in the short run. In the longer run, they could lead to a larger supply of productive innovations by present and future franchisors.

Note however that even if allowing larger returns encourages the development of productive and profitable know-how, the effect on economic efficiency in the long run is not totally clear. Although encouraging the supply of products and services based on new know-how may increase inter-brand competition among existing firms or result in new product innovations, it does not necessarily increase total surplus; in particular, competition may lead in some instances to too many brands and too much product variety.[52]

iii. Negative effects on inter-brand competition

In the short-run, incumbents' know-how may reinforce their position and limit competitive pressures from potential entrants. Therefore, they may give more force to types "A" and "B" effects, respectively relative to the impact of vertical restraints on tacit collusion and on other competition-dampening effects among existing rivals. Also, in the long run, by making it more difficult for potential competitors to enter the market, the incumbents' know-how may facilitate incumbent firms' entry-deterrence strategies (type "C" effects).

The analysis of franchise agreements must however also consider both the benefits of facilitating the transmission of accumulated know-how and skills, and the preservation of firms' incentives to make such production investments. As in the case of R&D races, there can be a conflict between the short-run maximization of allocative and productive efficiency and the long-run benefits of ensuring a private return to investments in intellectual property: firms need to be rewarded by earning returns on their investments in know-how.[53] Hence, an argument could be made that even provisions that restrict inter-brand competition could yield benefits if they promote stronger incentives to innovate and invest in know-how. It is doubtful, however, that restrictions expected to reduce such inter-brand competition should be allowed for these reasons. Doing so would create an exception within the structure of competition policy that would invite over-use, and that would be extraordinarily difficult to monitor and control. It would be very difficult to evaluate the impact on investment and welfare, and thus very difficult to quantify any possible efficiency benefits and balance them against the clear efficiency costs of reduced market competition.

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51 Franchise agreements are sometimes also advocated to better encourage the disclosure and dissemination of information. In particular, since they tend to lead to the definition of norms and the emergence of unified methods, they facilitate the circulation of information and the functioning of the "entrepreneurial market" (candidate entrepreneurs can enter the market more easily and choose among a larger number of alternatives).

52 See Katz (1989) for further discussion on the impact of interbrand competition on product proliferation.

53 Franchise contracts may in fact help reduce this conflict by allowing the franchisor and the franchisee to better coordinate their decisions and generate not only more profits but also more surplus, and particularly to eliminate double marginalization problems.

VI. CONCLUSION

The economic effects of vertical restraints have been grouped into two general categories: effects on vertical intra-brand co-ordination and on inter-brand competition.

A manufacturer and its distributors together form a single vertical structure, within which all firms' decisions contribute to determine the economic efficiency with which products and services are supplied. Moreover, many of these decisions (on pricing, quality, retail effort, etc.) not only affect the profits of the firm (distributor or manufacturer) making the choice, but affects as well the profits of the other firms; likewise, if distributors compete with each other, one distributor's decisions may directly affect other the distributors' profits. For each such decision, if the firm making the decision acts independently, it will ignore the spillover effects and, maximizing its individual profit, will fail to maximize the aggregate profits of the vertical structure. Including provisions that increase vertical co-ordination often will increase the aggregate profits of the vertical structure.

Vertical restraints can help coordination in three different ways. First, decisions can be coordinated by giving the manufacturer direct control over distributors' decisions, e.g. by giving the manufacturer the right to specify retail services or retail prices. Second, vertical restraints can restructure incentives; for example, a two-part tariff, combining a fixed fee and a price equal to marginal cost, makes the distributor feel the full effect of his decisions on aggregate profits. Third, where there are spillover effects between distributors, vertical restraints can alter intra-brand competition to reduce the externality; for example, granting exclusive territories may help solve free-riding in the provision of retail services.

Typically, different combinations of vertical restraints may be used to deal with a particular combination of problems. Vertical restraints that improve vertical co-ordination may increase economic efficiency as well as profits. For example, provisions that eliminate double marginalization both reduce retail prices and increase profits; hence economic efficiency increases since both profits and consumer surplus increase. Provisions that reduce the extent to which vertical or horizontal externalities discourage the supply of retail services may result in a more efficient supply of service and quality to consumers, especially if otherwise there would be substantial free-riding on retail services or investments in reputation. Provisions that allow the vertical structure to realize more of the productive value of its investments in know-how may efficiently encourage investments in productive know-how.

However, the vertical structure will seek to maximize its own profit, which may or may not also increase economic efficiency. For example, the choice of product quality or retail service that maximizes profit does not necessarily maximize consumer surplus or total surplus; vertical restraints that increase vertical coordination over retail service and quality may thus increase economic efficiency and also perhaps consumer surplus in some instances, but not necessarily. The greater the competition from other suppliers faced by the vertical structure, however, the more it will be constrained to make choices that benefit consumers, and therefore, the more it will make choices that increase economic efficiency and consumer surplus as well as profits.

The extent of competition from other brands and retailers, however, may be affected by vertical restraints. Vertical restraints may reduce competition among existing suppliers by increasing the risk of cartelization -- although only in market environments conducive to cartelization. They may also reduce market competition in the long run if used to erect substantial entry barriers and if competition is not already substantial. On the other hand, vertical restraints can also promote entry and inter-brand competition. For example, when vertical restraints increase profits without raising entry barriers, either

through increased efficiency or increased oligopolistic co-ordination, they promote entry. Also, when vertical restraints increase the returns that can be earned from investments in know-how, they promote investment in know-how, which in turn may lead to entry of both new brands and new retailers.

Several lessons can be derived from this analysis.

First, no simple conclusions can be drawn whereby any particular type of vertical restraint -- territorial restrictions, tie-ins, vertical price restraints, etc. -- will inevitably improve economic efficiency or reduce it. All types of vertical restraints, including both price and nonprice restrictions, may either increase or decrease efficiency and have quite different economic effects in different contexts. For example, territorial restrictions may promote efficiency if there would otherwise be extensive free riding on retail services, but they may be used by manufacturers as part of a strategy that reduces inter-brand competition. Consequently, a competition policy that makes a particular vertical restraint either always acceptable or always unacceptable will not match the treatment of that vertical restraint to its effect on economic efficiency in all circumstances. Also, different provisions sometimes may have very similar effects; for example, free riding may be reduced by either territorial or price restrictions.

Second, market structure and, in particular, the extent of inter-brand competition from other manufacturers and retailers is a crucial factor in the analysis of the effects of vertical restraints. Where a given vertical structure faces strong competition both from other brands and retailers, there is little potential for any type of vertical restraint to reduce economic efficiency. Strong competition at both levels ensures efficiency both of upstream supply and of distribution services. Hence, if the market structure -- level of concentration, conditions of entry, dynamics, etc. -- ensures that there exists a vigorous competition among rival vertical structures, vertical restraints are unlikely to harm economic efficiency or reduce competition. Conversely, in less competitive markets the risk is much greater that vertical restraints can be used to reduce competition or otherwise reduce economic efficiency.

Note that it is competition in the relevant product and geographic market that is important for determining the effects of vertical restraints on economic efficiency. Competition policy should thus focus on the extent of competition in the market from other brands and from other retail distribution systems, rather than only on intra-brand competition. Vertical restraints may reduce intra-brand competition without harming economic efficiency; with sufficient competition from other brands and retailers, a single vertical structure will be unable to reduce economic efficiency by exercising market power even if intra-brand competition is completely eliminated.

Third, where general market conditions leave open the question of whether a vertical restraint will increase or reduce efficiency, economic analysis provides guidance for identifying those specific circumstances in which a particular restraint may reduce competition or efficiency, or increase efficiency. For example, economic analysis identifies circumstances in which exclusive dealing might be used to raise entry barriers and circumstances in which reduced intra-brand competition might increase efficiency because it prevents free riding.

Fourth, the analysis should consider both long- and short-run effects of vertical restraints. Even if a vertical restraint has a negative or ambiguous effect in the short run, its net long-run effect may be positive because the restraint leads to increased entry or investment in intellectual property.

Policy design must however also consider enforcement costs. One way to reduce the enforcement costs of case-by-case analysis is to develop enforcement guidelines. Guidelines can increase the predictability of reviews by competition policy authorities. The guidelines also may reduce the cases requiring detailed analysis by including criteria and procedures for identifying those cases where there is a risk of anticompetitive effects and where more detailed analysis may be necessary.

Enforcement costs may first be controlled by establishing different rules or enforcement guidelines depending on the state of inter-brand competition. As a broad framework for making policy treatment contingent on market conditions, we can distinguish three market situations:

-- Vertical structures with small market shares in unconcentrated upstream and downstream markets, and new or established vertical structures attempting to enter a new market: in such "safe harbor" situations, either non-price or price restraints could be allowed; only the minimal analysis needed to establish competitive market conditions is necessary to determine economic effect.

-- Vertical structures that are non-negligible and well-established in their market: such situations could require a more detailed inquiry into the extent of competition in the market and, if then necessary, into the effects of proposed vertical restraints.

-- Vertical structures with a dominant position in their market: in such situations, a more detailed justification could be required from the firms to show that proposed vertical restraints would enhance efficiency without posing substantial risks for inter-brand competition, and that comparable efficiency gains could not be realized with lower risks for inter-brand competition.

In the first type of situation, there is a strong argument for establishing clear market structure criteria so as to determine whether a given vertical structure qualifies for a safe harbor within which both non-price and price vertical restraints are allowed. This policy would pose little risk for economic efficiency so long as the criteria were set to ensure competitive market conditions, and enforcement costs could be kept low by establishing criteria based on easily determined measures of market structure. Specific choices of market structure indicators and their critical values could be tailored to judgments in different jurisdictions about enforcement costs and the appropriate breadth of the safe harbor.

The design of policy rules towards vertical restraints in the other two market categories involves more difficult tradeoffs between enforcement costs and allowing policy evaluations to determine whether provisions help or harm efficiency. One possibility would be to do sufficient additional analysis to determine if markets are competitive even though the safe harbor criteria are not satisfied. Additional analysis might evaluate whether other basic conditions exist that would allow provisions, for example, to promote collusion or restrict future entry. If simple rules are used, rules of rebuttable presumption or *per se* rules with carefully defined safe harbors would allow somewhat greater flexibility than uniform *per se* legality or illegality. The following summary of the positive and negative effects of each type of restraint may help define useful guidelines.

For each type of restraint and each type of effect mentioned above, the above table summarizes the impact on the profits of the vertical structure ( ), on rivals' profits (' -- depending on the context, these rivals may be incumbent firms or potential entrants), on consumer surplus (CS) and on total surplus (CS), defined as the sum of all firms' profits and consumer surplus.

Regarding double marginalization problems, exclusive territories make only things worse for the vertical structure, since it exacerbate the retail margin. Hence, in that respect, they tend to increase the retail price above the price that would maximize joint profits (: -), which benefit rivals (': +) but decreases both consumer and total surplus. Imposing a price ceiling, on the other hand, helps solving the double marginalization problem, so that all signs are exactly reversed. Exclusive dealing having no clear link with double marginalization problems, a dot (.) appears in the corresponding cell.

Both exclusive territories, resale price maintenance and exclusive dealing can help solving coordination problem relative to the provision of retail services. This clearly increases the joint profits of the vertical structure, has no clear effect on rivals' profits and may either increase or decrease (in the case of substantial power, and of a strong divergence among consumers regarding the optimal tradeoff

between prices and services) consumer surplus and total welfare. If there is substantial free-riding among distributors, however, vertical restraints will benefits both the firms and consumers.

The same vertical restraints can also be used to help give the manufacturer better incentives to invest into quality, know-how, etc. Exclusive dealing can have direct effects, by preventing the distributors from free-riding on the manufacturer's investment, and both exclusive territories and resale price maintenance, who help generating larger profits, can indirectly give the manufacturer more incentives to invest. When restraints directly aim at preventing free-riding, as it is the case of exclusive dealing provisions, they are also likely to contribute also to enhance consumer surplus, hence the "plus" sign for both consumer and total surplus. In other situations, however, the impact on consumer surplus and total welfare may be more ambiguous (as for retail services).

Regarding effects on inter-brand competition, all types of restraints can first serve to sustain a (downstream) cartel, through a fake vertical agreement; when so used, they clearly increase profits but decrease consumer and even total surplus. It has also been shown that exclusive territories can be used by manufacturers not only to decrease intra-brand competition among their retailers, but also to strategically dampen upstream inter-brand competition, in which case they have the same impact as cartel devices. Likewise it has been sometimes argued (but not formally demonstrated, hence the question mark) that resale price maintenance might facilitate tacit collusion among competing brands. Both exclusive dealing and exclusive territories provisions have also been shown to help deter the entry of efficient entrants, and thus have again similar impacts (except that entry deterrence protect incumbents' rents but decrease potential entrants' profits, hence the "minus" sign regarding the impact on the profits of the other firms). Lastly, since all restraints may in one way or another be used to increase the profits generated by a vertical structure,they also increase *ex ante* incentives to enter a market, and have in that respect a positive impact both on consumer surplus and on the profits of the firms that entered the market and would not have otherwise, but reduce incumbents' profits and have an ambiguous impact on total surplus.

Note that many of the ambiguous impacts of "vertical coordination" effects become unambiguously positive, both on consumer surplus and total surplus, when inter-brand competition is strong enough. On the other hand, when inter-brand competition is initially weak, many of the ambiguous impacts of "entry promotion" effects are likely to become more unambiguously positive, since the risk of brand proliferation is much smaller.

Since all of these restraints do restrict competition (at least, intra-brand competition or, in the case of exclusive dealing, competition between brands within a particular outlet), they all fall under Article 85(1). However, they may benefit from an exemption under Article 85(3) each time their use lead to an increase in both total and consumer surplus (last two columns in the Table 1).

Effects	Restraints / Impact on	Exclusive territories				Resale price maintenance				Exclusive dealing			
			'	CS	TS		'	CS	TS		'	CS	TS
Intra-brand coordination	. Double marginalization	-	+	-	-	+	-	+ (price ceiling)	+				
	. Retail services (free-riding)	+	.	+/- (+)	+/ (+)	+	.	+/- (price floors) (+)	+/- (+)	+	.	+/- (+)	+/- (+)
	. Manufacturer effort	+	.	+/-	+/-	+	.	+/-	+/-	+	.	+	+
Inter-brand competition	. Downstream cartels	+	+	-	-	+	+	-	-	+	+	-	-
	. Competition dampening	+	+	-	-								
	. Collusion					+?	+?	-? (price floors)	-?				
	. Entry promotion	+	-	+	+/-	+	-	+	+/-	+	-	+	+/-
	. Entry deterrence	+	-	-	-					+	-	-	-

Table 1
The impact of vertical restraints

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