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ROUNDTABLE ON VERTICAL RESTRAINTS FOR ON-LINE SALES

-- Note by Mr. Michael Baye --

This note is submitted by Michael Baye (Indiana University, USA) to the Competition Committee FOR DISCUSSION under Item VII at its forthcoming meeting to be held on 26-27 February 2013.

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VERTICAL RESTRAINTS IN RELATION TO ONLINE SALES: SOME CAUSES, EFFECTS, AND CAUTIONARY NOTES

-- Note by Mr. Michael Baye [*]--

1. Introduction

1. Vertical restraints are controversial, as is evidenced by differences in laws across legal jurisdictions. Consider, for example, minimum resale price maintenance—a restriction imposed by a manufacturer (or supplier) on the lowest price retailers (or distributors) can charge for its product. In the United States, there is not a *per-se* prohibition against this practice at the federal level, but the practice is *per-se* illegal in a number of states. Similar differences exist among different countries for these and other vertical restraints, including minimum advertised prices (MAP) and Colgate policies (such as a manufacturer requiring retailers to engage in no-haggle pricing, to not sell its product online, or requiring retailers to adhere to "suggested" retail prices and unilaterally terminating any retailer violating such policies).

2. Since the internet tears down geographic boundaries, a manufacturer domiciled in one jurisdiction typically sells through retailers operating in multiple jurisdictions. Since it is costly for manufacturers to tailor contracts and pricing practices to many different countries, laws and enforcement actions by one member of the OECD may result in externalities (positive or negative) on manufacturers, retailers, and consumers in other jurisdictions.

3. My goal is three-fold: (1) to provide a simple paradigm that helps identify when vertical restraints are likely to be pro-competitive and when they are not, (2) to explain how online retail markets complicate the analysis, and (3) to provide some suggestions and caveats to agencies burdened with the task of distinguishing between potentially harmful and beneficial vertical restraints. My written comments are brief, as you requested. I would be happy to elaborate and answer any questions during the oral portion of my testimony.

2. Preliminaries: Manufacturers Prefer Low, Not High, Retail Prices

4. A common misperception is that manufacturers favor (minimum) resale price maintenance and other vertical restraints because they directly benefit from the higher retail prices arising from a lessening of intra-brand competition. This reasoning is incorrect. A manufacturer earns revenues based on its wholesale price, not the retail price. By the law of demand, consumers buy fewer units at higher retail prices, and this means that the direct effect of reducing intra-brand competition among retailers is to reduce the manufacturer's profits. In fact, assuming the manufacturer has market power, heightened competition among retailers selling its product results, other things equal, in higher profits. Indeed, if retailers compete in a perfectly competitive fashion to sell the manufacturer's product, retailers will price at marginal cost (the wholesale price) and the manufacturer earns the maximum possible profits. In contrast, when retailers

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also possess market power, double-marginalization occurs and retail prices are higher than the level that maximizes the manufacturer's profit. This harms not only the manufacturer, but also consumers who end up paying higher retail prices.

5. The punch-line is simple: Other things equal, a profit-maximizing manufacturer benefits from heightened competition among retailers selling its product. Manufacturers want to reach more— not fewer—customers, so lower retail prices and broadening its reach into online channels are beneficial to a manufacturer, other things equal.

3. Why, Then, Do Manufacturers Impose Restrictions on e-Commerce?

6. Why, then, would a profit-maximizing manufacturer impose restraints—such as (minimum) resale price maintenance, territorial restrictions, or refusing to deal with online retailers—that lessen intra-brand competition or seemingly limit its geographic reach? In answering this question, a little notation is helpful. Notice that the number of units (q) that the manufacturer sells depends on orders from retailers, which in turn depends on the *retail* price, p. At a retail price of p, demand is $q = q(p)$, so retailers order q units from the manufacturer. The manufacturer's profit is, in turn, given by

$$\pi = (w - m) \times q - F, \qquad (1)$$

where w is the *wholesale* price, m is its unit cost of production, and F is the manufacturer's fixed cost.

7. A higher *retail* price reduces quantity demanded through the retail channel, and thus reduces the number of units that retailers order from the manufacturer. Other things equal, a lower q in equation (1) translates into lower profits for the manufacturer. Thus, it is profitable for a manufacturer to *unilaterally and voluntarily* impose a vertical restraint only if doing so:

- increases the number of units the manufacturer sells (q), or
- reduces the manufacturer's unit (m) or fixed costs (F) of production, or
- increases the manufacturer's wholesale price (w).

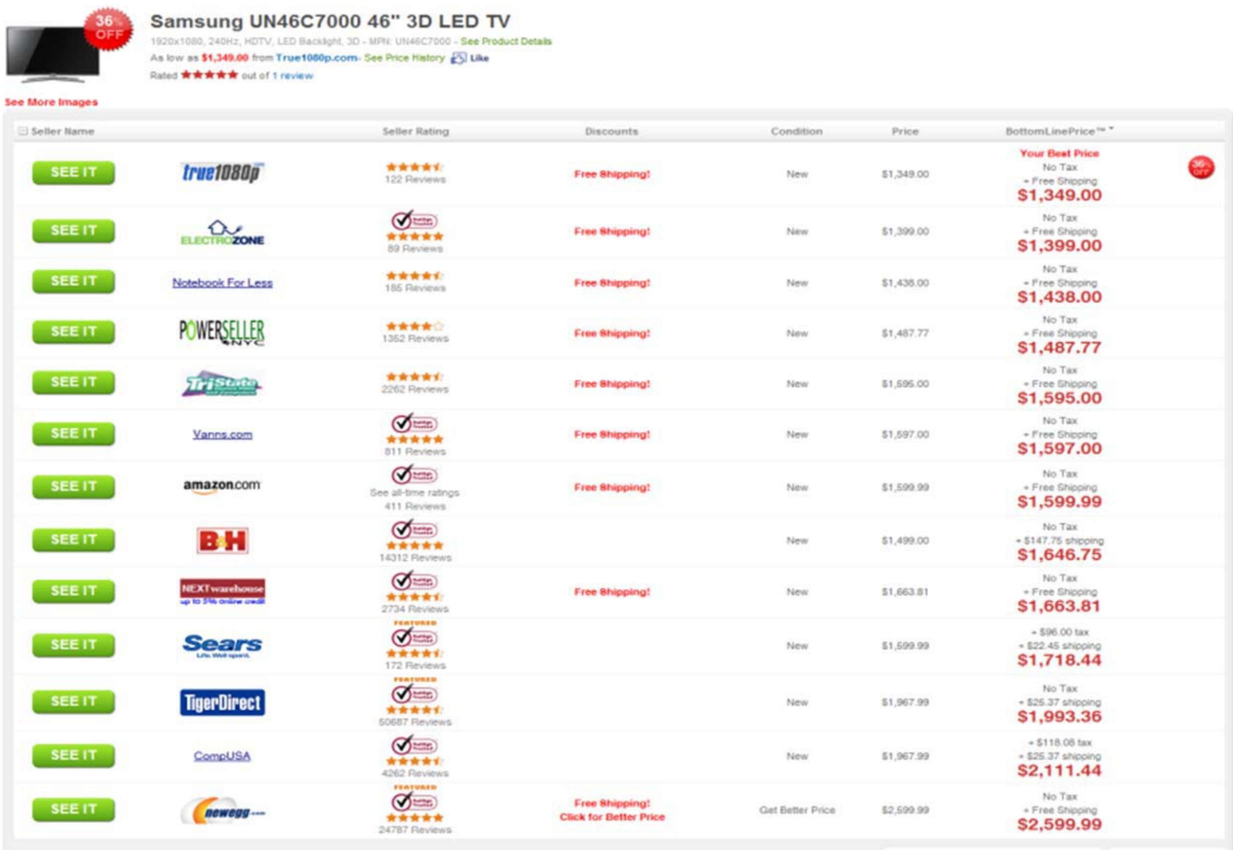
8. Otherwise, the higher retail price stemming from the vertical restraint leads to fewer units sold and lower profits for the manufacturer, which means that the manufacturer did not have a unilateral incentive to voluntarily impose the restraint in the first place.

9. The punch line here is also simple: The only reason a profit-maximizing manufacturer would ever *unilaterally and voluntarily* impose vertical restraints is because doing so somehow increases output, reduces costs, or raises the wholesale price. Only one of these three possible reasons—an increase in the wholesale price—adversely affects the welfare of consumers.

4. An Example from E-Commerce

10. Several potentially relevant issues are captured in the following hypothetical. Consider a consumer who, based on his past purchase decisions and knowledge of televisions, travels to a brick-and-mortar store to purchase a Sony 46" television. The store stocks a variety of brands including Sony and Samsung and allows the consumer to watch several competing brands while inside the store. After doing so, the consumer decides that the Samsung UN46C700 46" 3D LED TV—priced at $1,995.00 plus tax—is the best match for his preferences. Armed with this information the shopper travels home, visits the price comparison site, PriceGrabber.com (see Figure 1), and purchases the TV from an e-retailer to save over $600.

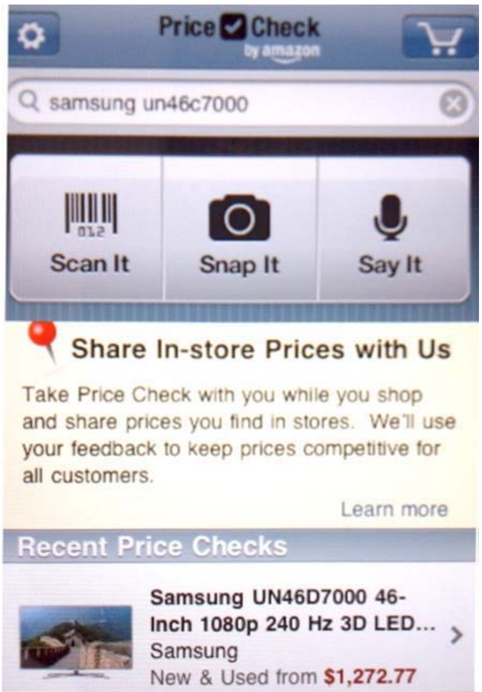
Figure 1: Screenshot from the PriceGrabber.com
(A Price Comparison Site)



11. What is the effect of this behavior on the manufacturer? Other things equal, Samsung doesn't care if the consumer buys its brand from an e-retailer for $1,349 or from a brick-and-mortar retailer for $1,995; in either case, it receives the wholesale price, not the retail price.

12. But recall from the hypothetical that the consumer went to the store to buy a Sony television; only after watching pictures on different sets did he learn that Samsung was a better match for his preferences. As shown in Figure 2, thanks to Apps such as Amazon's price check, consumers with a mobile device can actually purchase the item from an online retailer before leaving the brick-and-mortar store. And notice that this sort of shopping behavior reduces the brick-and-mortar retailer's incentive to continue to stock (and promote) Samsung TVs. In the longer run, this could harm both Samsung (by reducing its sales, q) as well as consumers who are unable to physically compare TVs before making a purchase decision. Manufacturer-imposed restraints—such as minimum resale price maintenance or restricting online sales of products—are a potential "fix" for this and other problems.

Figure 2: Screenshot from Amazon's Price Check (An App for the iPhone)



13. There are, of course, other potential solutions to this problem, such as the manufacturer integrating into downstream retail markets to directly sell its product to consumers, or writing more complex contracts with downstream distributors and/or retailers. Importantly, however, these and other potential solutions entail different costs, and a profit-maximizing manufacturer will take these costs into account in determining the optimal way to mitigate any deleterious effects of this type of behavior. Restricting manufacturers' tools for solving these sorts of problems can force them to turn to more costly options, which may raise wholesale (and hence retail) prices.

14. Additionally, if this behavior induces brick-and-mortar retailers to quit stocking Samsung TVs, or ultimately to go out of business, consumers who are on the "wrong" side of the digital divide or who are leery of purchasing without viewing different models, may be harmed. Thus, competition between traditional and online retailers may benefit consumers on one side of the digital divide at the expense of consumers on the other.

5. A Broader Look at Why Manufacturers Might Impose Vertical Restraints

15. As a matter of economic theory, vertical restraints may increase or decrease welfare, regardless of whether they are imposed in traditional or online markets. The formulation in equation (1) allows one to broadly organize pro- and anticompetitive theories according to how the restraints impact output, costs, and *wholesale* prices. Vertical restraints that increase a manufacturer's (quality adjusted) output, or that permit it to compete against the brands of other manufacturers at a lower cost than alternative mechanisms, are generally pro-competitive. In contrast, vertical restraints designed to reduce competition among *manufacturers* have the effect of increasing *wholesale* prices and are generally anti-competitive.

16. Below I provide a very coarse discussion of some issues to consider in evaluating these potential effects.

5.1 Agency Issues

17. In some instances, vertical restraints may be the most cost-efficient way for a manufacturer to solve agency problems that would otherwise lead retailers to underinvest in such things as inventories, service quality, or efforts to match consumers with the best product or brand for their tastes. There are of course a variety of different types of vertical restraints, as well as many different ways a manufacturer could mitigate agency problems. In considering different potential solutions to agency problems, a profit-maximizing manufacturer will consider not only their effectiveness, but also the associated costs. These are likely to vary across different types of products.

5.2 Free-Rider Issues

18. Free-rider issues can arise from the behavior of consumers (who physically inspect products at brick-and-mortar stores or receive advice from knowledgeable sales staff before purchasing them from an online seller with lower overhead costs), or retailers (who free-ride off of the general advertising efforts of competitors).

5.3 Counterfeits/Fraud

19. The internet provides unscrupulous retailers a plethora of means of selling counterfeits and versions of products intended for other uses or markets. In order to protect the reputation of its brand (thereby increasing its long-run output), a manufacturer might limit distribution to retailers having a brick-and-mortar presence. Different solutions to this problem entail different costs, which may vary depending on the characteristics of the product, the size and sophistication of the manufacturer, as well as the number of different legal jurisdictions in which it ultimately sells its product.

5.4 Pressure from Retailers Harmed by Online Competition

20. Existing brick-and-mortar retailers may be harmed by heightened competition from online merchants and attempt to pressure manufacturers into imposing vertical restraints. In the absence of adverse output effects arising from such competition (lower quality adjusted sales due to free-rider or agency issues, for example), it is not generally in a manufacturer's interest to give in to such pressure because doing so would reduce the manufacturer's profits. However, if the retailer has significant market power, can credibly threaten to "drop" the manufacturer's product from its stores, and if the manufacturer cannot withstand the short-run effects of being dropped, such pressure might induce a manufacturer to impose vertical restraints.

21. Notice that in this scenario, the vertical restraints reduce the manufacturer's profits relative to what they would have been "but for" the retailer's exercise of market power and also harm consumers. Retailer market power is of course necessary (but not sufficient) for this theory of consumer harm.

5.5 Competing with Other Brands

22. It is important to stress that vertical restraints can lead to pro-competitive output effects in the absence of free-rider issues, point-of-purchase service requirements, and the need to physically inspect goods prior to purchase. The key is to consider retailers' incentives to promote one manufacturer's product instead of another. In brick-and-mortar stores, this involves product placement (where products are displayed within the store), product recommendations (which product the sales staff "pushes" to shoppers), and so on. In the online channel, this includes the location of a manufacturer's product on the retailer's web page, product recommendations, shipping and return policies for the item, and so on.

23. For example, suppose a retailer's margin on brand X is 5%, while that on brand Y is 20%. Since the retailer's opportunity cost of carrying (or promoting) brand X is the 15% lost margin on sales of brand Y, the retailer has an incentive to promote the higher margin product over brand X. This reduces manufacturer X's sales. To the extent that vertical restraints raise the retail margin on brand X and thus increase retailers' incentives to stock or promote it, consumers may be provided access to a greater variety of brands than in the absence of such policies.

5.6 Commitment

24. As a matter of economic theory, it is possible that industry-wide vertical restraints, such as RPM, may be imposed as a commitment mechanism to soften price competition among manufacturers and raise the wholesale price. Other things equal, this reduces consumer welfare.

25. Two points are worth noting here. First, the appropriate "screen" for detecting such practices is the wholesale rather than the retail price, and this can be directly tested with data. Second, it is not sufficient to demonstrate that all manufacturers in a given industry are unilaterally imposing similar vertical restraints. Indeed, if product characteristics are such that one firm finds it in its unilateral interest to impose vertical restraints to mitigate, for instance, agency or free-rider problems, it is likely that other manufacturers face similar problems and thus have similar unilateral incentives. Thus, the mere fact that vertical restraints are being imposed by several manufacturers in a given market does not imply that they are anti-competitive. As discussed below, it is an entirely different matter if the restraints are imposed in a coordinated rather than unilateral fashion.

5.7 Manufacturer Cartel

26. Vertical restraints that are imposed in a coordinated rather than unilateral fashion are problematic because they may be used to mitigate competition among manufacturers, thus preventing the *wholesale* price from falling toward the competitive level. Other things equal, a higher (collusive) wholesale price results in higher retail prices, which reduce consumer welfare. Notice that this also harms retailers, regardless of whether they sell online or offline.

27. An important question is how vertical restraints might facilitate collusion among wholesalers. For the case of RPM, a common answer is that it aids manufacturers in circumventing problems with unobservable wholesale prices. In my view, this reasoning is not particularly compelling in online markets where manufacturers can readily obtain information about prices without the need for RPM (See Figure 1, for instance).

28. Another possibility is market-sharing agreements among manufacturers that are implemented through vertical (or territorial) restraints. To the extent that they are imposed in a coordinated fashion, the restraints may permit manufacturers to soften (wholesale) price competition and harm both consumers and retailers.

29. As a matter of economic theory, cartel and collusive theories of vertical restraints typically require a relatively small number of manufacturers. These theories of harm may be directly tested using data on wholesale prices.

5.8 Signaling

30. In some markets, consumers use price as a signal of product quality. To the extent that a manufacturer uses vertical restraints to prevent retailers from pawning off lower-quality versions of a manufacturer's product as being higher quality, such restraints may result in higher quality adjusted output and benefit consumers.

6. A Few Caveats

31. In considering whether vertical restraints are pro- or anticompetitive, it is helpful to focus on the incentives of manufacturers as summarized in equation (1). Restraints designed to increase quality-adjusted output or to economize on the costs of mitigating free-rider or agency problems generally improve the welfare of consumers and manufacturers, while restraints designed to mitigate inter-brand competition and increase wholesale prices harm consumers. As a general rule, wholesale prices and quantity-adjusted output are better indicators of whether a particular vertical restraint poses antitrust concerns than levels of retail prices or quality-unadjusted quantities. Below I discuss some caveats in interpreting different types of evidence that often surface in cases involving vertical restraints.

6.1 Evidentiary Caveats

6.1.1 Complaints from Online Retailers

32. Even in situations where vertical restraints are unambiguously pro-competitive and benefit both consumers and the manufacturer, the practices may adversely affect pure-play online retailers. In response, they may attempt to protect their self-interests by engaging in rent-seeking to influence antitrust authorities. Here, it is important to remember that the purpose of antitrust is to protect competition and consumers, not competitors. Consequently, a certain degree of caution is appropriate in weighing evidence that an online retailer is harmed by a particular type of vertical restraint.

6.1.2 Complaints from Traditional Retailers

33. Likewise, traditional retailers harmed by online competition are prone to "complain" about competition from online retailers, regardless of whether such competition benefits or harms consumers. But unlike online retailers who typically target antitrust authorities, traditional retailers sometimes have little recourse other than communicating their concerns to manufacturers. In light of agency issues, complaints that inform a manufacturer about free-rider problems, agency problems or low margins are potentially efficient. Retailers generally have better information about customer attitudes and behavior than manufacturers, and armed with such information, a manufacturer is in a better position to determine whether its overall output (and profit) is best enhanced by imposing vertical restraints. Thus, the mere fact that a traditional retailer unilaterally communicates concerns to manufacturers, or that a paper trail seems to indicate that vertical restraints were "instigated" by a retailer, does not imply that consumers were harmed.

34. In contrast, evidence that a retailer leveraged its market power to induce a manufacturer to impose a restraint that reduces output (and thus, the manufacturer's profit) is indicative of harm to consumers. For these reasons, output and manufacturer profit tests are likely to result in fewer "false positives" than relying on documentary evidence regarding whether the restraints were instigated by a retailer or manufacturer.

6.1.3 High Retail Prices.

35. Levels or changes in retail prices are not particularly helpful in distinguishing between pro- and anticompetitive vertical restraints. By their very nature, vertical restraints reduce intra-brand competition. As discussed earlier, it is not in a manufacturer's best interest to unilaterally increase retail prices unless it results in higher quantity-adjusted output (through sales and promotion efforts of retailers) or reduces the costs of mitigating other problems in distribution, such as counterfeits.

6.1.4 Fair Trade Laws and other Government Imposed Restraints

36. On the surface, vertical restraints might appear similar to government imposed restraints such as fair trade laws (which prevent *all* retailers from pricing below some specified level) or laws that limit retail shops' hours of operation. They are fundamentally different, however. Vertical restraints are implemented by a *manufacturer* to protect the manufacturer's interest, and in terms of their effect on retail prices, manufacturer interests are more aligned with consumers than retailers. In contrast, fair trade laws are implemented by governments to protect *retailers*, not consumers. Additionally, legitimate vertical restraints are *unilateral* and enforced by a manufacturer; fair trade laws have *coordinated* effects and are enforced by an outside entity. For these reasons, evidence that the elimination of fair trade laws or other government-imposed restraints improve consumer welfare is not helpful in deducing the welfare effects of eliminating vertical restraints.

6.2 Other Caveats

6.2.1 Rent-Seeking

37. Vertical restraints, by their very nature, adversely affect some retailers or distributors, and benefit others. This provides disadvantaged parties a strong incentive to engage in rent-seeking activities with agencies in an attempt to protect their own interests (as opposed to the interests of consumers or competition). For example, if a manufacturer imposes a vertical restraint that limits distribution to retailers operating in physical channels, one would expect online retailers to cry foul even if such practices are in the best interest of consumers. Similarly, to mitigate the double-marginalization problem in less competitive physical channels, a manufacturer might decide to shun traditional retailers in favor of online distribution. Here, traditional retailers have an incentive to cry foul even if the practice benefits consumers.

6.2.2 Distributional Effects

38. It is well-documented that, despite the reductions in information costs consumers have enjoyed as a result of the internet, prices of identical products remain dispersed (See Figure 1). While consumers using online markets to purchase products may benefit from heightened online competition, consumers who do not may be harmed if their local stores go out of business or stop carrying or promoting products sold online. Thus, there may be a tension between the effects of policies on the welfare of consumers on different sides of the digital divide. Even today, the penetration of internet sales varies widely among countries, and also varies across different products sold within a given country. Consequently, there is no universal answer to the question, "which consumer segment is the largest or most important?"

6.2.3 Short vs. Long-run Effects

39. It is important to consider both the long-run and short-run effects of vertical restraints. Even in situations where consumers are harmed in the short-run from vertical restraints, preventing firms from using this tool can reduce long-run consumer welfare. In the hypothetical discussed earlier, for example, consumers checking out products at brick-and-mortar stores before purchasing them online at lower prices would clearly be harmed if such an option was eliminated, but in the longer-run may be worse off if, the next time they wish to examine products prior to purchasing them online, no such comparisons are possible.

6.2.4 Small Firms, Global Markets

40. While firms have options other than vertical restraints (such as paying slotting allowances, using more complex contracts, and so on), the costs of these options may exceed those of simple vertical restraints. This is particularly true for smaller manufacturers. Differences in the costs of different options

may also arise due to asymmetries in the operating costs, business models, and sizes of firms operating in different markets and different channels (e.g., online and traditional markets).

6.2.5 Unilateral versus Coordinated Vertical Restraints

41. While there are many reasons not to treat unilateral vertical restraints such as resale price maintenance as inherently suspect, this is not the case for vertical restraints that are imposed in a *coordinated* fashion. Coordinated vertical restraints are more likely to increase wholesale prices, which as discussed above, improves manufacturer welfare at the expense of consumers and retailers, other things equal. I note that, while these concerns are typically covered by laws against collusion, effects can be directly tested by examining whether the restraints led to industry-wide increases in wholesale prices that are not attributable to exogenous factors, such as increases in labor costs.

6.2.6 Property Rights

42. To the extent that a manufacturer has made the investments required to bring a product to market, and possesses a clear property right on the product, one might argue that it has the right to choose the most efficient method of distributing its product to end-users. To the extent that a manufacturer has market power sufficient for exclusion or foreclosure to be antitrust concerns, this can be dealt with directly on the merits of the concerns.

6.2.7 Vertical Integration

43. It is useful to remember that a producer (a farmer, for instance) that is fully integrated into downstream channels (sells directly to end-consumers in the local farmers' market, say) typically has full flexibility with respect to its pricing and distribution decisions (subject, of course, to other relevant laws). Vertical restraints may be more efficient than vertical integration, and without the ability to impose vertical restraints a manufacturer may choose vertical integration when it, and consumers, would be better off with vertical restraints.