



BY JOHN ASKER & HESKI BAR-ISAAC¹

¹ John Asker, UCLA, NBER and CRESSE; johnasker@econ.ucla.edu and Heski Bar-Isaac, Rotman School of Management, CEPR and CRESSE; heski.bar-isaac@rotman.utoronto.ca.

I. INTRODUCTION

A central feature of ecommerce is the ease with which consumers, manufacturers and retailers can obtain price and other information. Indeed, in its report on ecommerce, the European Commission notes “The results of the sector inquiry show that the increased price transparency online is the feature that most affects the behavior of customers and retailers.”² In this context, it is perhaps unsurprising that the ecommerce sector is observing substantial and perhaps growing use of vertical restraints that are likely to be interfering with such price transparency to the benefit of firms. Whether these constraints are always to the benefit of consumers and competition is less clear.

This article describes those restraints, observed in ecommerce markets, which may be less familiar than other, better-studied in brick-and-mortar markets, vertical restraints, such as resale price maintenance, exclusive dealing arrangements and quantity forcing.³ A prominent example of a common ecommerce-related restraint is a minimum advertising price (“MAP”) restriction — a restraint whereby a manufacturer limits the price at which a retailer can advertise goods, while placing no restriction on the price actually charged. In an ecommerce context, a price published on the internet constitutes an advertised price, while the price revealed when presenting the shopping basket at checkout may be unconstrained.⁴ Since these restraints can make it more difficult for consumers to know what price they will actually end up paying if they make a purchase at a particular retailer, they might work to counteract the price transparency for which ecommerce allows.

This article describes the economic and strategic logic underpinning the obfuscation of price information by manufacturers and retailers. The article explains why this logic may be quite different from that associated with more familiar price restraints. This finding is particularly noteworthy in light of recent decisions and statements of the UK’s Competition and Markets Authority (“CMA”) that suggest an equivalence between MAP restrictions and resale price maintenance (“RPM”).⁵

II. ADVERTISING AND OTHER INFORMATION RESTRAINTS

In addition to highlighting the central role of price transparency, the European Commission report on the Ecommerce Sector Inquiry details a survey of more than a thousand retailers across the European Union. The survey notes that 8 percent of respondents mention limitations to online advertising. The most common restrictions reported are limitations, or recommendations, on price (reported by more than 42 percent of respondents). This broad characterization would appear to cover MAP-style provisions, among others.

While this EU report does not mention MAP restrictions explicitly, other evidence is suggestive of their prominence. Indeed, a simple internet search suggests that there is a competitive industry of firms that track and monitor violations of such policies.⁶ Furthermore, it is easy to find many examples of MAP provisions in standard form distribution contracts posted by manufacturers online.⁷

The EU report also mentions several other restrictions that might make it more difficult for consumers to easily observe prices: 18 percent of respondents report that manufacturers limit their ability to sell through online marketplaces/platforms, 11 percent report being restricted to selling online only through their own websites, and 9 percent face limitations on the use of price comparison tools. Furthermore, the commission notes that “Some agreements between manufacturers and retailers therefore contain contractual restrictions under which the retailers are

² European Commission, *Final Report on the Ecommerce Sector Inquiry*, May 2017, staff working document paragraph 147.

³ An excellent overview can be found, for example, in Rey & Vergé, “Economics of Vertical Restraints,” in *Handbook of Antitrust Economics*, Buccirosi (ed.), The MIT Press, chapter 9, April 2008, pp. 353–390.

⁴ There is contractual variation in the nature of advertisements allowed. In a contract for Enerpac, a manufacturer of high-pressure tools and equipment, it is explicitly stated that an advertising “price too low to print” would comply with the contract. By contrast, Ergotron Inc, a technology furniture manufacturer, in its Unilateral Minimum Advertised Price Policy for its products that are sold in the United States and Canada, effective October 30, 2013, states that “As part of its online advertising, a Reseller may not express statements or other indications on its website in connection with any UMAP Product that indicates or implies that a lower price, inconsistent with the UMAP Policy, may be found at the online checkout stage, including but not limited to phrases such as: ‘click here for a lower price’; ‘add to cart for lower price’; and ‘check cart for lower price.’”

⁵ In particular, see *Online resale price maintenance in the commercial refrigeration sector* Case CE/9856-14, May 24, 2016 and the discussion below.

⁶ Israeli, Anderson & Coughlan (2016), “Minimum Advertised Pricing: Patterns of Violation in Competitive Retail Markets,” *Marketing Science*, 35(4), 539-564 uses data from one such firm and reports that “These policies are very common in many industries, including electronics (e.g. Sony, Bose, Samsung), cameras (e.g. Olympus), video games (e.g. Nintendo), housewares (e.g. Viking, Sub-Zero), sporting goods (e.g. Callaway, TaylorMade), computers (e.g. Hewlett-Packard), toys (e.g. Activision Blizzard, LeapFrog), marine equipment (e.g. JL Marine), motor sports (e.g. GPR Stabilizer), and plumbing (e.g. Brasstech).

⁷ A collection of such contracts is available at: www.johnasker.com/MAP.zip.

limited in their ability to actively provide information or otherwise promote their online product offering with price comparison tools.” (European Commission, *Final Report on the Ecommerce Sector Inquiry*, staff working document paragraph 518).

III. A THEORETICAL EQUIVALENCE BETWEEN RPM AND MAP OR OTHER ADVERTISING RESTRICTIONS?

At first glance, it may seem that a minimum resale price maintenance provision and a minimum advertised price provision are much the same.⁸ Indeed, recent decisions of the CMA, referenced above, are consistent with this view. Under some conditions, MAP and RPM may well be functionally equivalent. In what follows, these (somewhat restrictive) conditions are discussed.

In the absence of some impediments or “frictions” in consumers’ ability to gather price information, all consumers should find the lowest price available. Competing retailers would, therefore, quickly end up charging the same price, absent differences in perceived service quality. However, evidence suggests that in online settings, price dispersion remains “sizeable, pervasive, and persistent.”⁹

Hence, even in an online environment, it may not be trivial for consumers to find the good that best matches their preferences or the lowest price for a good that they wish to purchase. Indeed, concern over searches and the way that they have been manipulated led the European Commission to fine Google for abusing its market dominance as a search engine by giving an illegal advantage to its comparison shopping service. In the factsheet that accompanied the press release announcing this decision on June 27, 2017, the commission noted that “in the ten highest-ranking generic search results on page 1 together generally receive approximately 95% of all clicks on generic search results (with the top search result receiving about 35% of all the clicks). The first result on page 2 of Google’s search results receives only about 1% of all clicks. The effects on mobile devices are even more pronounced given the much smaller screen size”¹⁰

Clearly, advertising restrictions, marketplace restrictions and limitations on price comparison tools do little to make it easier for consumers to gather price and other relevant product information.

In a seminal contribution by Peter Diamond, cited by the Nobel Prize committee in 2010 in announcing the award to Professor Diamond, it is shown that search frictions can have dramatic effects on prices.¹¹ The logic of this celebrated contribution, known as the Diamond paradox, is quite simple. Consider a market with many identical retailers selling the same good, and many identical consumers who are known to value the good at, for purposes of illustration, 10. Consumers have to visit a retailer to learn what price it charges, and doing so comes at a cost (albeit a small one, such as clicking on a few links and spending the time to read the site). This cost is identical for all consumers. Suppose it is 0.02. In this environment, even though there are many firms, the market equilibrium that emerges has all firms charging a price of 10 — the full consumer willingness to pay. This can be understood by supposing that it is not the case; that is, some other price is charged by firms. Next, given that in an equilibrium, consumers should correctly anticipate the distribution of prices across firms, a firm with the lowest price could raise this price by 0.01 (as long as the price is not higher than 10) and still expect the consumer to purchase there, since no consumer would pay 0.02 to visit another firm. Hence, for any price below 10, every firm has an incentive to increase its price by something less than 0.02, as this will have no impact on demand and will increase revenue and profit.

With this context, we can turn to alternative vertical restrictions and highlight an environment (albeit a somewhat special one) where there can be an equivalence between (minimum) RPM and restrictions that create search frictions (as limits on the use of price comparison sites, marketplace restrictions, and advertising restrictions may do). In the absence of any search frictions, the law of one price would prevail and, in the absence of any restrictions, intense competition would not allow retailers to earn any margins. If a manufacturer with market power wanted to

⁸ A minimum RPM provision sets a minimum price at which a retailer can sell the goods of a manufacturer.

⁹ Baye, Morgan & Scholten (2006), “Information, search, and price dispersion” in *Handbook on Economics and Information Systems*, Hendershott (ed.), 323-375 at p. 323.

¹⁰ European Commission - Press release Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service, June 27, 2017 available at: http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

¹¹ See Economic Sciences Prize Committee of the Royal Swedish Academy of Sciences, “Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2010: Markets with Search Frictions” (October 2010), which describes Diamond (1971), A Model of Price Adjustment, *Journal of Economic Theory* 3, 156—168 as laying out the “Diamond paradox” that “a small search friction can have a large effect on price outcomes, and it would not lead to any price dispersion at all.” Available at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2010/advanced-economicsciences2010.pdf.

allow its retailers to earn margins, then imposing an RPM regime with a retail price above the wholesale unit price provides one means of doing so.¹² To see this, and continuing with the example above, one action that the manufacturer might take is to set an RPM price of 10. Alternatively, the manufacturer could impose a vertical restriction that reduces price transparency (for example, MAP at a price of 10 or a ban on advertising).¹³ Then, consumers would have to search among retailers to see the true price, and, as the logic of the Diamond paradox in the paragraph above suggests, this would also lead to a retail price of 10.

It is noteworthy, however, that Diamond's result is termed a paradox for a reason: It is a theoretical result that seems to contrast with observed prices. Building on this observation, a literature in economics responds to Diamond's result by arguing that the underlying assumptions may be too stark and suggesting that in reality, goods may not be identical, consumers might vary in their search costs and in their valuations of goods and that retailers differ in their costs of bringing the wholesale good to market, or that the search process may differ slightly from that suggested in Diamond's model.¹⁴

Many of these departures from Diamond's model suggest that advertising restrictions may operate quite differently from price restraints.

IV. NON-EQUIVALENCE BETWEEN RPM AND MAP OR OTHER ADVERTISING RESTRICTIONS

Whereas price restraints tend to lead retailers to charge similar prices, advertising restraints can make it easier to sustain retail price dispersion — that is, to allow different retailers to charge different prices or different consumers to face different prices. In an environment that features heterogeneous consumers and/or heterogeneous retailers, a manufacturer can benefit from such price dispersion.

As a simple example, extend the setting above to suppose that only half of the consumers have a valuation of 10 and the other half have a valuation of 15. Further suppose that all retailers (perhaps through use of cookies and tracking technologies) can perfectly observe the valuation of any consumer who visits them. In the absence of any restrictions and with frictionless consumer search (for instance, via truthful competitive advertising or transparency via a price comparison site), identical retailers competing only through prices would all charge the same price to all consumers. RPM could help ensure that retailers earn margins and that the retail price is either 15 or 10 (either may maximize the combined industry profits, depending on the industry cost structure).¹⁵

By contrast, an advertising restriction, by creating a friction inhibiting a consumer's ability to see prices across all retailers, could allow retailers to charge different types of consumers different prices. This could lead to higher industry profits, which could be shared by retailers and the manufacturer through fixed franchise, licensing or other similar fees and hence could benefit both retailers and manufacturers.¹⁶

In this example, MAP provisions can facilitate a form of retailer-based price discrimination, which is unavailable using RPM. This arises through the suppression of information by the MAP provision coupled with the flexibility in pricing retained by the retailers relative to RPM. Furthermore, it may be that consumers with lower valuations benefit from this discrimination, as the retailer's ability to offer them lower prices means that they may not be priced out of the market.

¹² As discussed below, there may be pro-competitive reasons to do so as suggested by Telser (1960), "Why Should Manufacturers Want Fair Trade?" *Journal of Law and Economics*, 3, 86-105, among others. Asker & Bar-Isaac (2014), "Raising Retailers' Profits: On Vertical Practices and the Exclusion of Rivals," *American Economic Review*, 104(2), 672-686, highlight that there may also be anti-competitive reasons for doing so in fostering exclusion, while a large literature has considered the role of RPM in allowing for collusion.

¹³ There is a literature that has focused on the incentives of individual retailers to obfuscate prices. A useful overview is Fisher Ellison (2006), "Price Search and Obfuscation: An Overview of the Theory and Empirics," Chapter 12, *Handbook on the Economics of Retailing and Distribution*, Basker (ed.), 287-305. Here, instead, we consider the incentives of an upstream manufacturer in a vertical chain with several downstream retailers.

¹⁴ Baye, Morgan & Scholten (2006), "Information, search, and price dispersion" in *Handbook on Economics and Information Systems*, Hendershott (ed.), 323-375, provides a clear and useful introduction and guide to this theoretical literature.

¹⁵ In fact, RPM is not required to ensure that the price is either 10 or 15; the manufacturer could ensure this through varying the wholesale price; however, this would not entail a profit for retailers without the use of direct transfers from the manufacturer, such as slotting fees. If the manufacturer wished to induce a margin per unit, then RPM would be of use.

¹⁶ See Asker & Bar-Isaac (2017), *Vertical Information Restraints: Pro- and Anti-Competitive Impacts of Minimum Advertised Price Restrictions*, NBER Working Paper No. 22771.

V. FURTHER PRO- OR ANTI-COMPETITIVE EFFECTS

The example above is sufficient to show that advertising restrictions can behave quite differently from pricing restrictions. In a recent working paper (“Vertical Information Restraints: The Pro- and Anti-Competitive Impacts of Minimum Advertised Price Restrictions”), we consider several other cases and highlight that MAP, advertising restraints, and other vertical restraints that affect search frictions can have pro- or anti-competitive effects relative to either no restraints or to RPM. In all these cases, the search frictions that such restraints foster allow for different prices to prevail in the retail sector. These prices can lead to higher industry profits by, as above, giving retailers more flexibility to respond to heterogeneity (in either consumer demands or in retailer costs).

In a first case, similar to the example, we consider how such restrictions lead to an arrangement akin to price discrimination but at the level of the retail industry rather than that of individual retailers in a market where each retailer must charge the same price to every consumer. Instead of individual-retailer-level price discrimination, a related outcome arises when consumers vary in both their costs of searching and in their valuation of the good. Special attention is given to the case in which these consumer characteristics are related, so that those with high valuations also have high costs of search (for example, these may correspond to consumers with high incomes and high opportunity costs of time). In this setting, consumers with high valuations search little and are more likely to buy from retailers who charge a high price, whereas consumers with lower valuations who shop around are more likely to find retailers selling at lower prices. Through appropriate wholesale arrangements, a manufacturer can benefit from the industry-level profits that would result. These would be greater than those that could be realized when all retailers charge the same price — the outcome that would arise in the absence of any advertising or informational restraints. Furthermore, this discrimination-like outcome could lead to higher or lower total surplus depending on whether more or fewer consumers are served.

More generally, the voluminous literature on vertical restraints suggests numerous pro- and anti-competitive effects of price-based restraints. The U.S. Supreme Court’s 2007 *Leegin* decision provides an interesting and policy-relevant summary that highlights how the weight of economic evidence led the court to conclude that the antitrust impact of RPM should be decided on a rule-of-reason basis. In essence, pro-competitive rationales suggest that RPM, by suppressing intra-brand competition, can foster inter-brand competition or otherwise lead to efficiency-enhancing investments by retailers (such as educating sales staff, efforts in enhancing or maintaining a premium reputation or stocking a good in the face of uncertain demand). In an online context, such concerns may be heightened as some consumers visit brick-and-mortar stores to better understand the products and buy online, or, in other ways, retailers free-ride off other retailers’ investments. However, there remain concerns of the anti-competitive effects that RPM may have in facilitating either upstream or downstream collusion and facilitating exclusion.

Consequently, it is instructive to revisit some classical pro-competitive rationales (service provision where retailer free-riding may arise) and anti-competitive rationales (upstream collusion) with MAP provisions in mind. Advertising restrictions, such as MAP, can allow a manufacturer to accommodate retailer heterogeneity, allowing retailers with different costs of bringing goods to market (or whose costs may fluctuate over time) to respond to their differing costs by charging differing prices. Similarly, retailers with different local market conditions may benefit from the flexibility of MAP, while still benefiting from a reduction in intra-brand competition afforded by the obfuscation of transaction prices that MAP provides. This can allow a more effective means of providing margins that in turn incentivize retailers to provide services to consumers. Of course, if the objectives of manufacturers and consumers are not aligned, then the service that is provided, although benefiting manufacturers, may be detrimental to consumers. Many vertical theories of cartel-facilitation and exclusion have this flavor, and as such it is no surprise that MAP can be effective in supporting cartel behavior, particularly in settings where consumer search matters. By contrast, the “one-size-fits-all” RPM policy may be less effective in achieving either pro- or anti-competitive goals.

In addition to the range of effects that advertising restrictions might have, how consumers search is very important — both in the absence of any restrictions (where there should be greater price transparency and all consumers can find the lowest prices easily) and in the presence of such restrictions (where search frictions should be more pronounced).

VI. POLICY IMPLICATIONS

Thus far, this article has argued that advertising and related restraints are common and in an ecommerce environment may be increasingly so. These restraints can have different economic effects and rely on different logic compared to the types of price restraints that have been extensively explored in the literature and by antitrust authorities and the courts.¹⁷ Furthermore, recent developments suggest that there may be a lack of clarity on this distinction.

Notably, the CMA, in its decision on *Online resale price maintenance in the commercial refrigeration sector*, and earlier Office of Fair Trading decisions,¹⁸ has suggested that MAP provisions operate in much the same way as other restraints that constitute a restriction “by object” under Article 101(1). For example, the CMA’s press release at the conclusion of the *commercial refrigeration sector* case states that: “The CMA found that Foster’s minimum advertised price policy constituted RPM because, by restricting the price at which its goods were advertised online, it prevented dealers from deciding the resale price for those goods.”¹⁹

Indeed, following the decision on the commercial refrigeration sector, the CMA issued an open letter to suppliers and retailers on June 20, 2016 and updated it on June 21, 2017 following its decision *Online resale price maintenance in the light fittings sector*.²⁰ This guidance, while perhaps more circumspect than the statement above, suggests that the regulator’s distinction between MAP and RPM agreements is subtle at best.²¹

Therefore, this seems to be an opportune time to highlight that the underlying economics of MAP and other advertising and related practices can differ from those of RPM and other, similarly well-understood, vertical restraints. Treating information restrictions (such as MAP) as a form of price restriction (such as RPM) seems premature in our view. There appear to be good reasons for the regulatory approach to such practices to develop further with reference to, but separately from, that applied to price restraints. This is particularly so given the growing use and range of these practices in ecommerce and the opportunity this affords to gain further insight into their pro- and anti-competitive impacts on a case-by-case basis.

17 However, there is some precedent on MAP as discussed in a U.S. context by Beth Albert (2012), “Adding Uncertainty to the Virtual Shopping Cart: Antitrust Regulation of Internet Minimum Advertised Price Policies,” *Fordham Law Review*, 80(4), 1679-1719, and Passo (2015), “Internet Minimum Advertising Price Policies: Why Manufacturers Should Be Wary When Implementing,” *Suffolk University Law Review*, 48, 795-822. Background on the UK and EU treatments can be found in Hughes (2017), “Bright line or barbed wire? The classification of supplier influence over resale prices under EU competition law,” *European Competition Law Review*, 38 (6), 272-287.

18 *Online resale price maintenance in the commercial refrigeration sector*, Case CE/9856/14; *Lladró Comercial*, CA98/04/2003 [2003] UKCLR 652; *Pride Mobility Products Ltd.*, Case CE/9578-12, March 27, 2014; *Roma-branded mobility scooters: prohibitions on online sales and online price advertising*, Case CE/9578-12, August 5, 2013.

19 *Fridge supplier fined £2.2 million for restricting online discounts*, available at: <https://www.gov.uk/government/news/fridge-supplier-fined-22-million-for-restricting-online-discounts>.

20 *Open letter to suppliers and retailers about resale price maintenance (RPM) and compliance with competition law 20 June 2016*, available at: <https://www.gov.uk/government/publications/restricting-online-resale-prices-cma-letter-to-suppliers-and-retailers>.

21 Hughes (2017), “Bright line or barbed wire? The classification of supplier influence over resale prices under EU competition law,” *European Competition Law Review*, 38 (6), 272-287 provides a forceful and wide-ranging critique of regulatory practice on MAP.