

The Pros and Cons of Vertical Restraints

Konkurrensverket
Swedish Competition Authority

© 2008 Konkurrensverket
Swedish Competition Authority
Individual chapters © 2008 The Contributors
ISBN 978-91-88566-44-7
Printed in Sweden by
08 Tryck AB, Bromma 2008

Preface

“The Pros and cons of Vertical Restraints” is the seventh in the Swedish Competition Authority’s Pros and Cons series. This volume collects the five papers that formed the base of an inspiring and well-attended conference, which was held in Stockholm on November 7. The authors from around the world presented their work and senior officials from competition authorities around Europe acted as discussants. The lively debate and many appreciative comments I heard at the conference is testimony of the high professional standard of the contributions and of their relevance for competition policy.

I would like to express my sincere gratitude to all contributing authors, to the discussants and to the moderator of the conference, Luc Peeperkorn. At the Swedish Competition Authority, Arvid Fredenberg has managed the project and acted as editor together with Sten Nyberg; they both deserve due credit. Finally, many thanks to Bengt Kopp, who provided invaluable assistance in organizing the conference and in producing this conference volume.

Stockholm, November 2008

Jan-Erik Ljusberg
Acting Director-General

Table of contents

The contributors	5
1. Introduction.....	9
<i>By Arvid Fredenberg</i>	
2. The Effects of Vertical Restraints: An Evidence Based Approach.....	12
<i>By Margaret E. Slade</i>	
3. The Antitrust Treatment of Vertical Restraints: Beyond the Possibility Theorems.....	40
<i>By Daniel P. O'Brien</i>	
4. Buyer-Driven Vertical Restraints.....	102
<i>By Paul W. Dobson</i>	
5. Price Control in Vertical Relations	135
<i>By Patrick Rey</i>	
6. Is Nothing Sacred? Resale Price Maintenance and the EU Policy Review on Vertical Restraints	167
<i>By Joanna Goyder</i>	

The contributors

Margaret E. Slade is Professor Emeritus at the University of Warwick (UK) and at the University of British Columbia. She is an associate editor at the *International Journal of Industrial Organization* and previously held the same position in the *Journal of Industrial Economics* and the *Canadian Journal of Economics*. Margaret Slade has served as consultant for several institutions including the Federal Trade Commission in the US, the Canadian Restrictive Trade Practices Commission and the Bureau of Competition Policy of Canada. Among her publications: "Mergers, Brand Competition, and the Price of a Pint," (with Joris Pinkse) *European Economic Review*; "Market Power and Joint Dominance in UK Brewing," *Journal of Industrial Economics*, "Retail Contracting: Theory and Practice" (with Francine Lafontaine) *Journal of Industrial Economics*; *Spatial Price Competition: a Semiparametric Approach*, (with Joris Pinkse and Craig Brett) *Econometrica*.

Daniel P. O'Brien is a Senior Economic Policy Advisor in the Bureau of Economics at the U.S. Federal Trade Commission. He received his Ph.D. in economics from Northwestern University. He has taught economics at Northwestern University, the University of Michigan, and Georgetown Law School. His research in the area of industrial organization has focused primarily on antitrust and regulation and has been published in the *American Economic Review*, the *Rand Journal of Economics*, the *Antitrust Law Journal*, among other journals in economics and law. His policy experience includes serving as Deputy Director of the Bureau of Economics at the U.S. Federal Trade Commission and Chief of the Economic Regulatory Section at the Antitrust Division of the U.S. Department of Justice.

Paul W. Dobson holds the Chair of Competition Economics at Loughborough University Business School in the United Kingdom,

where he has resided as a full professor since 1998. His research interests focus on industrial economics and competition policy, with particular regard to the economic analysis of retailing, vertical agreements, mergers and market power. He has produced numerous commissioned reports, books, and academic articles on these matters. He has also acted as an adviser and consultant to a wide range of competition authorities, international organisations, Industry associations, and individual companies. He has undertaken competition analysis on a wide range of industries including retailing, wholesaling, fast-moving consumer goods, telecommunications, financial services, brewing, property selling, sports, printed media and books, with advice in regard to mergers, strategic alliances, market investigations, vertical relations, and cooperative agreements. Paul presently serves on the advisory board of the American Antitrust Institute, where in 2004 he became its first non-American board member. He is affiliated to CRA International as an academic senior consultant and is also a director of Competition Analysis Ltd, a provider of economic analysis for competition law cases, merger inquiries and market investigations.

Patrick Rey graduated from Ecole Polytechnique (1981) and ENSAE (1983), and holds a PhD and a « Habilitation à diriger des Recherches » (University of Toulouse, 1992). Patrick Rey started his career at ENSAE, INSEE (Bureau of economic forecasts) and CREST (where he started the Laboratoire d'Economie Industrielle – research lab on Industrial Organization), before joining the University of Toulouse as a professor of economics and the Institut d'Economie Industrielle (IDEI), of which he is currently the director. Patrick Rey has taught in many institutions both in France (ENSAE, Ecole des Ponts et Chaussées, INSEAD, EHESS, ENAC) and abroad (MIT, Lausanne, Budapest, Wuhan) and is also a professor at Ecole Polytechnique and a senior member of the Institut Universitaire de France. He is a Fellow of the *Econometric Society*, has published numerous articles in renowned scientific reviews and serves or has served on the boards of several of them (*Review of Economic Studies* 1992-1999, *Journal of Public Economics* 1998-2002, *Journal of Industrial Economics* since 2001,

Journal of European Economic Association since 2003). His themes of interest cover Industrial Organization, competition policy, regulation, and the theory of information, of firms and of organizations. Patrick Rey has also served as expert for OECD, the World Bank, the US department of Justice and the European Commission, where he has been a member of the *Academic Advisory Group* of the Merger Task Force and is now a member of the *Economic Advisory Group on Competition Policy* of DG Competition. He also serves on the *Commission Consultative sur les Réseaux et Services de Communications Electroniques* (hosted by the French regulator for telecoms and postal services) as well as on other competition authorities' advisory committees. He is a co-founder of the *Association for Competition Economics* (ACE). Current position: Professor of economics, Toulouse School of economics Director, Institut d'Economie Industrielle (IDEI)

Joanna Goyder is qualified as a Barrister, England and Wales and has a first class law degree from Cambridge University. She also holds post-graduate degrees from the Université Libre de Bruxelles and the European University Institute, Florence. She has worked in Brussels in the field of EU and competition law since 1990. Since 2000 she has been head of knowledge management and legal training for the Freshfields Bruckhaus Deringer international competition law practice. She and her team are responsible for ensuring that all lawyers in the global practice are kept up to date with relevant legal and policy developments and their implications, and that such developments are communicated to clients. Her role also includes designing and organising legal and economics training for lawyers at all stages in their career, and drafting responses to EU legislative and policy proposals on competition law. Joanna is the author of *EC Distribution Law* (4th edn., 2005, Hart Publishing) and has contributed to a number of other books, most recently the *Oxford Encyclopaedia of European Community Law – Volume Three: Competition Law and Policy* (2008, Oxford University Press) and *Issues in Competition Law and Policy* (2008, American Bar Association). She is also joint author of the forthcoming *D.G. Goyder's EC Competition Law* (5th edn., 2009, Oxford University Press). Since 2002 Joanna has

given seminars to LLM students at Cambridge University. She speaks French, Italian, Spanish and Dutch.

1 Introduction

Arvid Fredenberg

The treatment of vertical restraints in competition law has been subject to debate and controversy. Most vertical restraints are harmless or even welfare enhancing but some are, at least potentially, harmful. The effects do not always follow directly from the form of the restraint. Designing adequate competition law that in an easy way handles this distinction is therefore hard. Competition authorities are thus helped by a deeper knowledge of the effects of vertical restraints. This volume is devoted to exploring the pros and cons of vertical restraints.

In the first contribution, Margaret E. Slade assesses the empirical evidence of vertical restraints. She reports the findings of the existing studies and finds that there appears to be a difference between voluntarily imposed restraints and those that are mandated by the government. While the former tends to be welfare enhancing, the latter typically reduce consumer welfare. This suggests perhaps that competition authorities should not use competition law to target vertical restraints imposed by firms but should rather use advocacy to push governments to remove harmful vertical restraints.

The empirical literature on the subject is thin and Slade concludes by saying that: *“Perhaps the most important lesson that can be learned from an examination of the empirical evidence on vertical restraints is how scant that evidence is, especially when compared to the amount of theoretical research on the subject. It is therefore imperative that more evidence be gathered.”*

If there is a lack of empirical studies, there is plenty of theoretical literature on vertical restraints. In the second contribution, Daniel P. O’Brian takes us back 170 years and argues that most robust results in the theoretical literature on the subject can be traced back to Cournot’s work. Cournot’s work implies, according to the author, a fundamental theorem of antitrust: *“Combining substitutes is bad, and*

combining complements is good, unless demonstrated otherwise." Firms in the vertical chain can be seen as supplying complements, so this would imply that vertical contracts are pro-competitive unless demonstrated otherwise.

O'Brian then examines the theories showing that vertical restraints can have negative effects that have been put forward during the last decades. Following a scientific approach, his conclusion is that most new theories are sensitive to different assumptions and not completely reasonable. His view is summarised in the statement: *"possibility theorems without more do not provide a good basis for policy."* He therefore argues that competition authorities should only challenge vertical restraints when they have direct evidence of likely harm.

Vertical restraints are usually seen as conditions that an upstream producer imposes on its downstream distributors. In the third contribution, Paul W. Dobson examines vertical restraints that are put in place by buyers. He provides a classification of such restraints and points to welfare effects of the most common ones. Dobson digs deeper into three practices commonly used in the grocery sector; slotting allowances, category management and exclusive supply agreements and finds that they can be harmful. He urges that: *"competition authorities must be vigilant and courts aware of the danger posed by unchecked retailer buyer power when it manifests itself in competition-reducing or competition-eliminating vertical restraints."*

Patrick Rey, in the fourth contribution, starts with the paradox that competition authorities and courts treat price restraints harder than non-price restraints whereas the economic literature does not see a reason to do so. Firms may often use either a price restraint or a non-price restraint to achieve the same effect. He then examines two anticompetitive effects that can only arise in the presence of resale price maintenance (RPM); the use of RPM to facilitate upstream collusion and the use of RPM in interlocking relationships.

In the first case, coordination is easier with RPM than with e.g. quantity quotas or territorial protection clauses. In the second case, RPM eliminates intrabrand competition and allows rival manu-

facturers to avoid interbrand competition as well by having the same resellers.

The fifth contribution is, in contrast to the first four, a legal one by Joanna Goyder. She starts with the question of how an understanding of economics should be transformed into workable legal rules. Whereas economic models are filled with assumptions, legal rules should be clear and easy to apply.

Goyder then guides us through the US Supreme Court judgement in *Leegin* with the conclusion that: *“what might first appear a radical break with previous law and practice is in fact a much more nuanced, and as yet not complete, development.”* Moving on to Europe, she gives an overview of the EU law and policy on vertical restraints and points to what changes can be foreseen.

Taken together, the five contributions shed light on the issue of the pros and cons of vertical restraints. Hopefully, this volume contributes towards a better understanding of the mechanisms through which vertical restraints have an impact on markets – and towards a more effective enforcement of the competition rules.

2 **The Effects of Vertical Restraints: An Evidence Based Approach**

*Margaret E. Slade*¹

2.1 Introduction

Vertical restraints (VR), which are restrictions that one level in a vertical chain imposes on another, are written into many contracts between, for example, manufacturers and retailers. In spite of their ubiquity, however, they are controversial. Indeed, many economists think that their principal role is to enhance efficiency and should therefore be viewed as beneficial, whereas others believe that their primary purpose is to increase market power and should therefore be considered pernicious. Moreover, conflicting academic attitudes are mirrored in changing and inconsistent antitrust policies towards vertical restraints. Indeed, while some practices are designated as per se illegal, others are subject to a rule-of-reason approach, and it has even been suggested that VR should be per se legal (e.g., Posner 1981). Furthermore, these attitudes and classifications often differ by restraint within a jurisdiction and time period, by jurisdiction within a time period, and over time within a jurisdiction.

Many of the economic theories that emphasize the efficiency aspects of vertical restraints have been developed in the context of a workably competitive environment, such as the provision of fast food, the brewing, distribution, and retailing of beer, or the production and sales of automobiles. Those theories emphasize the conflicts

¹ This paper was prepared for presentation at the Pros and Cons of Vertical Restraints Seminar held by the Swedish Competition Authority, Stockholm, Sweden, November 7, 2008. It is based on a series of joint papers with Francine Lafontaine, Stephen M. Ross School of Business, University of Michigan.

that can occur between links in a vertical chain, which can lead to outcomes that are undesirable for both. In particular, in a principal/agent framework with upstream firm as principal and downstream firm as agent, VR can be used to align incentives and internalize externalities. Moreover, not only do the firms that choose VR benefit from their adoption, else they would have little incentive to do so, but also consumer satisfaction usually increases.

Many economic environments, however, are not workably competitive, and when market power exists at one or more links of the chain, VR can enhance it. This need not mean, however, that consumers are harmed, since there is usually a trade-off between efficiency and market power. Nevertheless, VR can be detrimental for consumers, especially when they exclude rival firms from the market or facilitate collusion among them.

From this brief discussion, it should be clear that economic theory alone cannot determine if VR should be encouraged or discouraged. It can only suggest circumstances under which one outcome or the other is more likely. It is thus imperative that we turn to the evidence to see if any robust conclusions can be drawn from it. This chapter is therefore devoted to an assessment of the empirical evidence.²

The organization of the chapter is as follows. In the next section, I discuss the choices that a manufacturer must make when deciding how to organize her relationships with retailers. I emphasize retailing rather than procurement because most VR occur at this level of production; that is, they are imposed by a manufacturer on retailers. Section 3, which briefly describes the principal reasons for employing VR, considers both efficiency and market-power enhancing motives. The exploration of the evidence is begun in section 4, where the consequences of VR for economic outcomes such as prices, consumption, and profits are examined. To anticipate results, the evidence suggests that VR, when adopted voluntarily, do not hurt consumers. However, when they are imposed from outside

² A different approach to the evidence can be found in Cooper et. al. (2005).

of the vertical chain, they are most often harmful. These findings might therefore suggest that firms should be free to choose those restraints that they find privately profitable, since consumer and producer objectives appear to be aligned. To assess the robustness of that conclusion, section 5 contains a more general assessment of some of the most worrisome potential consequences of restrictive agreements – foreclosure and raising rivals costs. Since those outcomes can be facilitated by vertical integration as well as by restrictive contractual practices, the assessment in that section includes both forms of vertical arrangement.

The chapter does not contain any new empirical evidence. Instead, it looks at the body of evidence that has been accumulating to determine if there are robust conclusions that emerge from it and, if so, if those conclusions can provide guidance to economic theorists and antitrust policy makers.

2.2 Manufacturer/Retailer Relationships

Consider an example of a manufacturer who produces a product that must be sold. The first choice that she faces is to sell the product herself or to employ independent distributors and retailers. If the first option is chosen, we have vertical integration, whereas if the second is selected we have market transactions. Both alternatives are extremely common. For example, in developed economies about equal volumes of transactions occur inside firms and in markets.³ Furthermore, there is a large literature that deals with the relative merits of the two modes of transaction and the costs and benefits that are associated with each.⁴ Since I am concerned with vertical restraints, however, I limit attention to market transactions.

³ This number is obtained by dividing value added, which measures internal transactions, by gross output, which includes purchases of intermediate inputs as well as value added.

⁴ For a survey of the empirical literature on vertical integration, see Lafontaine and Slade (2007).

With a market transaction, the downstream firm pays a wholesale price, takes possession of the product, and resells it at a retail price. Once it has been determined that markets will be used, however, the manufacturer must decide between arm's length transactions in spot markets and long-term contracting with retailers and distributors. There are many reasons why contracting might be chosen, including the desire for secure relationships and the potential for smoothing prices, inventories, and sales.⁵ In addition, contracts can often be used to obtain most of the benefits of vertical integration, which brings us to our next choice.

Contracts can be simple sales arrangements that stipulate a wholesale price. At the opposite extreme, however, they can include many restrictions on the downstream firms' activities (VR). For example, the upstream firm can attempt to control the retail price (resale price maintenance or RPM), the quantity sold (quantity forcing), the sales territory of each agent (exclusive territories or ET), or the purchases of other inputs (a form of tying). The manufacturer's third choice is therefore whether to restrain the retailer and if restraints are chosen, which to use. As we will see below, vertical restrictions can help achieve many objectives, including internalizing externalities and providing dealers with appropriate incentives. They can also be used to enhance market power.

Finally, the manufacturer must choose between using exclusive agents who sell only the manufacturer's products (exclusive dealing or ED) or common agents who carry the brands of many manufacturers. Approximately one third of retail trade in developed economies involves exclusivity. For example, both traditional franchising (e.g., autos and gasoline) and business-format franchising (e.g., fast food and hotels) are forms of exclusive relationships.⁶ On the other hand, common agents include grocery

⁵ For a survey of the empirical literature on inter-firm contracting, see Lafontaine and Slade (2008b).

⁶ With traditional franchising, the upstream firm produces a product that the retailer sells. With business-format franchising, in contrast, there is no

and department stores. Although other forms of VR occur in many contexts, they are most common in an exclusive-dealing environment.

Figure 1 summarizes the possible relationships between up and downstream firms and locates vertical restraints within this context.

2.3 Motives for Imposing Vertical Restraints

In this section, I briefly review some of the theories that have been proposed to explain the use of vertical restraints. They can be grouped into motives that are efficiency enhancing and those that are market power strengthening. I make no attempt to be comprehensive but instead discuss some of the most important cases.

2.3.1 Efficiency Motives

Most of the efficiency motives for imposing vertical restraints do not hinge on the existence of market power at any level of the vertical chain. The succession-of-monopoly problem, however, which is discussed last, requires market power at each link. In spite of this fact, the elimination of double marginalization enhances efficiency since prices fall and quantities rise.

Free-Riding and Opportunism

Manufacturers who invest in improving retail outlets, promoting retail products, or training outlet managers might worry that dealers will free ride on those investments. For example, if an upstream firm invests in improving the quality of retail facilities, it benefits not

production upstream. Instead the franchisor sells a way of doing business as well as the right to use her trademark.

only her own brands but also the brands of rivals if they are sold in the same facilities. Absent restraints, the desirability of the investment is lessened. Exclusive dealing resolves this problem by excluding rival brands from the outlet. In this context, exclusive dealing is a mechanism that enables manufacturers to protect their investments and thus encourages potentially profitable improvements.

Alternatively, dealer services at the point of sale can enhance the demand for a manufacturer's product. Retailers, who are residual claimants on their own unit's profits, obtain a benefit from the value of the brand thus generated. However, they do not fully internalize that benefit, as some of their customers with positive experiences will patronize other units of the same chain rather than returning to their unit in the future. In contrast, retailers bear the full cost of the policy. As a result, they will tend to provide a quality that is too low from the perspective of the upstream firm. Furthermore, the problem worsens as the fraction of repeat business falls.

Not only do dealers have incentives to free ride on the value of the brand and put in too little effort, a vertical externality, they also have incentives to free ride on services offered by other dealers, a horizontal externality. Telser (1960) argued that minimum price restraints could solve both of these free-riding problems by preventing retailers from competing on price and leading them to compete instead on quality or customer service. Klein and Murphy (1988) instead proposed that manufacturers could use vertical restraints such as minimum resale prices or exclusive territories to ensure that their dealers earn above normal returns, which would mean that those dealers would have something to lose if their contracts were terminated. Such rent, in combination with ongoing quality or service monitoring and the threat of termination, would entice dealers to provide the desired level of quality or service. In either case, since the quality and service levels in question are valued by customers – if it were otherwise manufacturers would not care about them – consumer satisfaction and hence quantities sold should be enhanced.

A related but different dealer-incentive issue arises in situations where the manufacturer wants the dealer to invest *ex ante* in specific facilities or human capital in order for him to provide better service to consumers. Unless the dealer can be assured that his investments are fully protected, however, he will choose to under invest or not invest at all. In other words, the dealer needs protection from potential manufacturer opportunism. A vertical restraint such as an exclusive territory can provide the guarantee that the dealer needs.⁷ While the exclusivity of the territory might give the dealer some market power, consumers benefit from the resulting investment and thus the restraint can have positive welfare effects.

In some cases the quality problem can take the form of a dealer or franchisee wanting to use lower quality inputs in the production process. This type of free riding can be resolved with input-purchase requirements (tying) or approved-supplier programs as long as defection from such programs is not too difficult to detect.

Double Marginalization or the Succession-of-Monopoly Problem

The typical succession-of-monopoly problem arises when an upstream monopolist sells an input to a downstream firm at a price above marginal cost. If the downstream firm also has market power, it is well known that it will choose a price that is higher, and a quantity that is lower, than the price and quantity that would maximize joint profits.⁸ There are many VR that can be used to overcome the double-marginalization problem and reduce retail prices. For example, a maximum resale price is an obvious candidate. Alternatively, a manufacturer could use a minimum

⁷ For this solution to work, the upstream firm must be able to verify downstream investment and to terminate the contract if it is unsatisfactory.

⁸ A full understanding of successive monopoly dates at least to Spengler (1950), although one can find its origins in Cournot's (1838) analysis of complementary products. Greenhut and Ohta (1979) discuss the oligopoly case.

quantity requirement or a two-part tariff. When double marginalization is an issue, the imposition of vertical restraints will not only increase the overall efficiency of the vertical structure but also lead to lower prices for customers. Those restraints are thus beneficial for all parties.

2.3.2 Anticompetitive Motives

Unlike most of the motives discussed in the previous subsection, market power is a prerequisite for the motives of this subsection to apply. In particular, in this context VR are market-power enhancing, not creating. There are many anticompetitive motives for imposing VR. However, I concentrate on two of them, exclusion and collusion, because those are the motives that most concern competition authorities.

Foreclosure and Raising Rival's Costs

The main worry of antitrust authorities when it comes to vertical restraints is the possibility that their use will foreclose entry by competitors at some level of the vertical chain. For example, a manufacturer who establishes an exclusive retail network (i.e., exclusive dealing) that involves most retailers, might prevent her competitors from gaining access to customers at a reasonable cost, if at all. This in turn could prevent entry of potential competitors or perhaps even lead rivals to exit the upstream industry. With this example, foreclosure need not be complete; it suffices to simply raise rivals' costs. The argument, however, requires that entry into retailing be costly due to, for example, economies of scale or a scarcity of good locations. Exclusive dealing, which has sometimes been referred to as vertical integration by contract, is the form of restraint for which foreclosure arguments are most frequently made. In addition, when there are few uses for an input, tying can foreclose entry of firms in the tied goods industry.

Cartels and Monopolization

The ways in which vertical restraints can facilitate dealer cartels and monopoly power are easy to understand. For example, a manufacturer that imposes a minimum price for her product can help a dealer cartel enforce the monopoly price.⁹ Similarly, exclusive territories, if they are large enough, can insulate retailers from competition by eliminating nearby competitors as well as preventing entry. The main issue that these arguments raise, however, is why manufacturers would find it in their own best interest to impose restraints that do not increase upstream profits. If the manufacturers impose two-part tariffs, however, the fixed fees can be used to capture the rents that are earned downstream.

Restraints can also facilitate collusion among manufacturers. For example, exclusive dealing ties each seller to a manufacturer and eliminates the manufacturers' temptation to grant secret price cuts in order to steal rival customers and increase market shares. Since cheating is one of the biggest problems that a cartel must solve, VR can enhance cartel stability.

In the end, if vertical restraints are used to overcome incentive problems and internalize externalities, prices to consumers should be lower or qualities should be enhanced. If, however, they are used to lessen competition at some level of the vertical structure through foreclosing, disadvantaging rivals, or facilitating collusion, prices to consumers should be higher and quantities sold smaller than they would be in the absence of such restraints.

2.4 The Empirical Evidence on Vertical Restraints

This section, which draws heavily on Lafontaine and Slade (2008a), gathers together and organizes the findings from the set of empirical papers that assess the effects of vertical restraints. Although I am

⁹ See e.g. Ornstein (1985).

sure that some studies are missing, an attempt was made to be comprehensive.

Vertical restraints can be privately imposed. In other words, they can be voluntarily entered into by the parties to an agreement and written into the contracts that they sign. When this occurs, the presumption is that the profitability of the vertical chain is enhanced. The question as to how they affect consumers, however, remains. Vertical restraints can also be imposed from outside of the relationship by some level of government. When this occurs, it is often due to lobbying, either by dealers who claim to be disadvantaged or by rival upstream firms who seek protection. With mandated restraints, not only can consumers be harmed but also the profitability of the vertical chain can be lessened.

Since the effects of vertical restraints can differ according to who is responsible for imposing them, the discussion below is organized by type of restraint and by whether that restraint was adopted voluntarily or was forced upon the vertical structure. Specifically, table 1 shows those studies that focus on privately imposed vertical restraints, whereas table 2 contains assessments of mandated vertical restraints, where, for example, the government intervenes and requires that retailers be granted exclusive territories or imposes rules governing termination.¹⁰

In both tables, the last three columns show the outcome variable under scrutiny (Variable (Y) in the table), the direction of the estimated effect of the restraint on that variable (Effect (Y)), and the conclusion that is reached in the paper concerning the consequence of the restraint for consumer wellbeing (Effect (W)). For example, if the variable under scrutiny is consumption, a + in the next-to-last column means that the use of the restraint was associated with larger consumption, whereas a + in the last column indicates that consumers are better off as a consequence.

¹⁰ Note that the restraints studied in table 2 were imposed by a government. If instead they had been prohibited by a government, the study would appear in table 1.

In performing this exercise, we looked at the overall effect of the restraint. This means that if, for example, the restraint is estimated to result in higher prices and increased consumption, we indicate that it was good for consumers,¹¹ whereas if only higher prices resulted, we indicate that it was bad. Unfortunately, when only the effect on prices is examined, there is some ambiguity in the findings. In particular, although we classify higher prices by themselves as bad, they can be good if they result from higher quality services.

Given the small number of available studies, it is difficult to make definitive claims about robust empirical regularities. Nevertheless, the results are quite striking. Indeed, table 1 show that, in all but three cases, privately imposed vertical restraints benefit consumers or at least do not harm them. The three exceptions are studies that show that particular restraints are associated with higher prices, and the difficulties that are associated with interpreting price effects have already been discussed.¹² Ignoring price effects, the table indicates that voluntarily adopted restraints are associated with lower costs, greater consumption, higher stock returns, and better chances of survival.

Table 2, in contrast shows that, when restraints are mandated by the government, they systematically reduce consumer welfare or at

¹¹ The combination of higher prices and increased consumption is usually interpreted as being due to increased provision of services, which are costly to provide but are valued by consumers.

¹² For example, Slade (2000) finds that beer prices are higher in tied houses than independent establishments, where tied houses operate under an exclusive-purchasing agreement with a brewer. On the one hand, one could argue that this finding is not negative, since pubs do not really sell beer; instead they sell 'an evening in the pub,' which is different in the two types of establishment. On the other hand, one could interpret the finding as evidence of an anticompetitive effect, since pubs are geographically separated and once in the pub, customers only compare the prices of the brands that are offered. If independent houses carry more brands, price elasticities are apt to be larger in absolute value and markups are apt to be lower.

least do not improve it. It appears that, when firms or consumer groups convince the government to ‘redress’ the unfair treatment that they allege to be suffering, the consequences are higher prices, higher costs, shorter hours of operation, and lower consumption as well as lower upstream profits.¹³

In general then, the empirical evidence leads one to conclude that consumer well being tends to be congruent with manufacturer profits, at least with respect to the voluntary adoption of vertical restraints. When the government intervenes and forces firms to adopt (or discontinue the use of) vertical restraints, in contrast, it tends to make consumers worse off. Moreover, this is true even when the pressure for the intervention comes from consumers themselves. When the pressure comes from downstream firms, intervention tends to lead to dealer entrenchment and the inability of manufacturers to use restraints as incentive devices.

To conclude, although there are clearly limitations to the set of available studies in terms of techniques used, industry coverage, and ability to interpret the findings, the empirical evidence is consistent and convincing. Taken at face value, tables 1 and 2 indicate that vertical restraints in manufacturer/retailer settings are publically desirable when privately desirable, and thus government intervention is not warranted in those situations. This is not to say that the use of VR should never be questioned, but the presumption should not be that they are detrimental to consumers. The current rule-of-reason approach, combined with “safe harbors” for manufacturers with low market shares, seems more than justified based on this evidence. Furthermore, mandated restraints tend to be welfare decreasing, and hence government policies that are aimed at helping firms and consumers tend to be misguided, counter-productive, and inconsistent with the goals of competition policy.

¹³ The increase in license values that is found by one study indicates that any benefit to upstream firms accrues to the original (not the current) holder of the license.

2.5 The Empirical Evidence on Foreclosure

To some, the conclusions that have been drawn based on the empirical evidence of the effects of vertical restraints may seem too strong. In particular, the set of studies that is examined is based more on the availability of relevant data than on the potential for competitive harm. In addition, it is not obvious that it contains a representative sample of industries in which anticompetitive motives such as foreclosure are apt to surface. For this reason, this section, which draws heavily on Lafontaine and Slade (2007), analyses the empirical evidence on foreclosure directly. The advantage of this approach is that the choice of case studies here is based to a large extent on actual allegations of foreclosure and challenged mergers. The disadvantage is that most of the studies are concerned with vertical integration, not restraints. The analysis in this section is thus conservative. Indeed, if the evidence of competitive harm due to foreclosure is not strong when one considers natural monopolies such as cement and concrete or cable TV and programs, it is unapt to be of great concern when one considers the settings where vertical restraints are typically used.

Unlike the previous section, which assesses the effects of vertical restraints (i.e., how their use changes economic outcomes), the assessment in this section is of incidence (i.e., when and if foreclosure occurs). The presumption is that, all else equal, foreclosure is harmful. Some studies, however, attempt to evaluate not only if foreclosure occurs but also if there are countervailing efficiencies. Finally, still other studies perform an overall welfare analysis to determine the net effect.

Foreclosure and Raising Rival Costs

Since competition authorities have focused most attention on foreclosure and raising-rival-cost motives for vertical arrangements, it is not surprising that empiricists have also devoted considerable

attention to testing whether vertical arrangements give rise to foreclosure.

Table 3 lists articles that test for foreclosure effects. In the table, we do not distinguish between foreclosure and raising rivals' costs. Instead, we include studies that consider imperfectly competitive industries in which some firms are vertically integrated and some are not and where the authors attempt to assess the consequences of that difference. Some of the studies look for tendencies to exclude the products of unintegrated rivals (e.g., rival programs in the case of cable TV), others assess whether unintegrated rivals pay higher prices for the upstream product (e.g., wholesale prices for gasoline), whereas still others evaluate stock-market reactions to vertical-merger announcements (e.g., changes in returns to holding shares in either rival or downstream consumer firms).

It is clear from the table that some authors have uncovered evidence of foreclosure. However, the existence of foreclosure is, by itself, insufficient to conclude that vertical integration is pernicious. For example, Salinger (1988) constructs a model that shows that there are two countervailing factors associated with vertical mergers: an increase in foreclosure or other practices that disadvantage rivals and a lessening of double marginalization or other practices that are inefficient. One must therefore balance the two effects.

Two of the papers in the table attempt to assess that trade-off (i.e., Mullin and Mullin (1997) and Chipty (2001)), and both conclude that efficiency gains outweigh foreclosure costs. The evidence in favor of anticompetitive foreclosure is therefore at best weak, particularly when one considers that the industries studied were chosen because their vertical practices have been the subject of antitrust investigations.

Divorcement

The mergers and divestitures that appear in table 3 were voluntarily undertaken by the parties to the transaction.¹⁴ Not all changes in vertical structures, however, come from within the upstream/ downstream relationship. Indeed, it is not uncommon for government agencies to mandate structural changes, usually divestitures. This is most apt to occur when the agency believes that the vertical structure is exacerbating horizontal market power.

Consider an example from the gasoline industry. Gasoline stations can be owned and operated by the oil company (CC contracts), owned by the company but operated by the dealer (CD contracts), or owned and operated by the dealer (DD contracts). In other words, transactions can occur within a vertically integrated firm (CC), in an arm's length market (DD), or under an intermediate arrangement (CD), and there are many efficiency considerations that motivate the choice among those possibilities. Nevertheless, in a number of instances, competition authorities or regional governing bodies have alleged that anticompetitive motives outweigh efficiency considerations when firms make that choice. In particular, a number of US states have outlawed CC contracts on the grounds that integrated oil companies would attempt to disadvantage unintegrated down-stream competitors.

Table 4 contains details of five studies that relate to the issue of divorcement. The three studies that assess gasoline divorcement directly (Barron and Umbeck (1984), Vita (2000) and Blass and Carlton (2001)) conclude that retail prices and costs were higher and hours were shorter after it occurred. In other words, they are unanimous in concluding that the policy was misguided. The fourth study of the gasoline market, Hastings (2004), looks at a somewhat different issue. She finds that, although retail prices are higher at

¹⁴ We do not mean that the table excludes hostile takeovers. Instead, it excludes mergers or divestitures that have been mandated by public authorities.

vertically integrated stations than at unintegrated independents, there is no difference between prices at CC and CD stations. Given that the rationale behind divorcement is that CC arrangements give oil companies incentives to charge higher wholesale prices to CD stations, her finding is unsupportive of that motive.

Finally, the contracts that are written between brewers and publicans in the UK beer market are almost identical to those between oil companies and service stations in the US. Moreover, those contracts have also been the subject of investigations that eventually led to divorcement. However, in that market divorcement involved changes in ownership not mode of operation. In other words CD contracts with fixed fees were forcibly converted to DD contracts. Slade (1998a) finds that that change also led to higher retail prices, probably as a result of the introduction of double marginalization.

The logic that led to divorcement regulations thus seems to have been flawed. In particular, the forced move from CC to CD contracts for gasoline appears to have ignored the fact that integrated oil companies owned the affected stations and chose whether to operate them under CC or CD arrangements. Having made a profit-maximizing decision to operate some of their owned stations internally and allow dealers to operate the others under rental contracts (presumably based on efficiency considerations), it would be perverse for those companies to turn around and attempt to disadvantage their affiliated CD retailers and drive them out of the market. After all, the oil company could have chosen closure or self operation for those outlets in the first place.

The thinking that led to the move from CD to DD contracts in the beer market, in contrast, appears to have ignored the fact that divestiture is associated with countervailing factors — the introduction of double marginalization and the elimination of foreclosure — and that the former costs can outweigh the latter benefits.

2.6 Conclusions

Perhaps the most important lesson that can be learned from an examination of the empirical evidence on vertical restraints is how scant that evidence is, especially when compared to the amount of theoretical research on the subject. It is therefore imperative that more evidence be gathered. In general, this would involve research that studies vertical restraints in different industries and/or using different empirical techniques. One should not forget, however, that it is also important to replicate existing results in slightly different settings (e.g., in different geographical regions). Only after this has been done will we be able to draw strong conclusions.

Having said this, one should notice that even though the evidence is scant, it is consistent. Indeed, it shows that voluntarily adopted restraints are usually efficient whereas restraints that are mandated from outside of the vertical chain are usually counter-productive. Furthermore, even when one moves from an assessment of vertical restraints to an assessment of the most worrisome motives that underlie competition authorities' concern with those restraints, one sees that the evidence is mixed. In particular, when one looks at environments that are more conducive to competitive harm than those where VR are likely to be prevalent, the evidence of such harm is weak. I therefore conclude that the burden of proof should lie with the authorities that allege that restraints are anticompetitive and not with the firms that voluntarily adopt them.

References

- Allen, B. (1971) "Vertical Integration and Market Foreclosure: The Case of Cement and Concrete," *Journal of Law and Economics*, 14: 251–274.
- Asker, J. (2004) "Measuring Cost Advantages from Exclusive Dealing an Empirical Study of Beer Distribution," New York University mimeo.
- Azoulay, P. and Shane, S. 2001 "Entrepreneurs, Contracts, and the Failure of Young Firms," *Management Science*, 47: 337–358.
- Barron, J.M. and Umbeck, J.R. (1984) "The Effects of Different Contractual Arrangements: The Case of Retail Gasoline," *Journal of Law and Economics*, 27: 313–328.
- Barron J.M., Taylor, B.A. and Umbeck, J.R. (2004) "Will Open Supply Lower Retail Gasoline Prices?," *Contemporary Economic Policy*, 22: 63–77.
- Blass, A.A. and Carlton, D.W. (2001) "The Choice of Organizational Form in Gasoline Retailing and the Cost of Laws that Limit that Choice," *Journal of Law and Economics*, 44: 511–524.
- Brenkers, R. and Verboven, F. (2006) "Liberalizing a Distribution System: The European Car Market," *Journal of the European Economic Association*, 4: 216–251.
- Brickley, J.A., Dark, F.H., and Weisbach, M.S. (1991) "The Economic Effects of Franchise Termination Laws," *Journal of Law and Economics*, 34: 101–132.
- Chitty, T. (2001) "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry," *American Economic Review*, 91: 428–453.

- Cooper, J., Froeb, L.M., O'Brien, D., and Vita, M. G. (2005) "Vertical Antitrust Policy as a Problem of Inference," *International Journal of Industrial Organization*, 23: 639-664.
- Cooper, J.C. (2006) "Public versus Private Restraints on the Online Distribution of Contact Lenses: A Distinction with a Difference", FTC mimeo.
- Cournot, A. (1838) "Recherches sur les Principes Mathematiques de la theories' des Richesses," English translation by N.T. Bacon (1897).
- Culbertson, W. P., and Bradford, D. (1991) "The Price of Beer: Some Evidence from Interstate Comparisons." *International Journal of Industrial Organization*, 9: 275-89.
- Ford, G.S. and Jackson, J.D. (1997) "Horizontal Concentration and Vertical Integration in the Cable TV Industry," *Review of Industrial Organization*, 12: 501-518.
- Gill, R. (2007) "Revenue Sharing Distortions and Vertical Integration in the Movie Industry," *Journal of Law, Economics, and Organization*, forthcoming.
- Gilligan, T.W. (1986) "The Competitive Effects of Resale Price Maintenance," *RAND Journal of Economics*, 17: 544-556.
- Greenhut, M.L. and Ohta, H. (1979) "Vertical integrations of successive oligopolists." *American Economic Review*, 69: 137-141.
- Haas-Wilson, D. (1987) "Tying Requirements in Markets with Many Sellers: The Contact Lens Industry," *Review of Economics and Statistics*, 69: 170-175.

- Hanssen, A. (2000) "The Block-Booking of Films Re-Examined," *Journal of Law and Economics*, 43: 395–426.
- Hastings, J. (2004) "Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California," *American Economic Review*, 94: 317–328.
- Hastings, J. and Gilbert, R. (2005) "Market Power, Vertical Integration, and the Wholesale Price of Gasoline," *Journal of Industrial Economics*, 469–492.
- Hortacsu, A. and Syverson, C. (2007) "Cementing Relationships: Vertical Integration, Foreclosure, Productivity, and Prices," *Journal of Political Economy*, 115: 250–301.
- Ippolito, P. M. and Overstreet, T.R., Jr, (1996) "Resale Price Maintenance: An Economic Assessment of the Federal Trade Commission's Case against the Corning Glass Works," *Journal of Law and Economics*, 39: 285–328.
- Jordan, J. and Jaffee, B.L. (1987) "The Use of Exclusive Territories in the Distribution of Beer: Theoretical and Empirical Observations," *Antitrust Bulletin*, 32: 137–164.
- Klein, B. and Murphy, K.M. (1988) "Vertical Restraints as Contract Enforcement Mechanisms," *Journal of Law and Economics*, 31: 265–297.
- Lafontaine, F. and Slade, M.E. (2007) "Vertical Integration and Firm Boundaries: The Evidence," *Journal of Economic Literature*, 45: 631–687.
- Lafontaine, F. and Slade, M.E. (2008a) "Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy," in

Handbook of Antitrust Economics, Paolo Buccirossi (ed.)
Cambridge: MIT Press, 391–414.

Lafontaine, F. and Slade, M.E. (2008b) “Contracting between Firms: Evidence” in *Handbook of Organizational Economics*, R. Gibbons and J. Roberts (eds.) Princeton University Press, forthcoming.

Mullin, J.C. and Mullin, W.P. (1997) “United States Steel’s Acquisition of the Great Northern Properties: Vertical Foreclosure or Efficient Contractual Governance?” *Journal of Law, Economics, and Organization*, 13: 74–100.

Ornstein, S.I. and Hanssens, D. (1987) “Resale Price Maintenance: Output Increasing or Restricting? The Case of Distilled Spirits in the US,” *Journal of Industrial Economics*, 36: 1–18.

Ornstein, S. (1985) “Resale Price Maintenance and Cartels,” *Antitrust Bulletin* 30: 401–432.

Posner, R. (1981) “The Next Step in the Antitrust Treatment of Restricted Distribution: Per se Legality,” *University of Chicago Law Review*, 48: 6–26.

Reiffen, D. and Kleit, A. (1990) “Terminal Railroad Revisited: Foreclosure of an Essential Facility or Simple Horizontal Monopoly?” *Journal of Law and Economics*, 38: 419–438.

Rosengren, E.S. and Meehan, J.W. (1994) “Empirical Evidence on Vertical Foreclosure,” *Economic Inquiry*, 32: 303–317.

Salinger, M. A. (1988) “Vertical Mergers and Market Foreclosure,” *Quarterly Journal of Economics*, 103: 345–356.

Sass, T.R. (2005) “The Competitive Effects of Exclusive Dealing: Evidence from the US Beer Industry,” *International Journal of Industrial Organization*, 23: 203–225.

- Sass, T.R. and Saurman, D.S. (1993) "Mandated Exclusive Territories and Economic Efficiency: An Empirical Analysis of the Malt-Beverage Industry," *Journal of Law and Economics*, 36: 153-177.
- Sass, T.R. and Saurman, D.S. (1996) "Efficiency Effects of Exclusive Territories: Evidence from the Indiana Beer Market," *Economic Inquiry*, 34: 597-615.
- Slade, M.E. (1998) "Beer and the Tie: Did Divestiture of Brewer-Owned Public Houses Lead to Higher Beer Prices?" *Economic Journal*, 108: 1-38.
- Slade, M.E. (2000) "Regulating Manufacturers and their Exclusive Retailers," in *Foundations of Competition Policy*, Morten Berg and Einar Hope (eds.), London: Routledge, 133-149.
- Smith II, R. L. (1982) "Franchise Regulation: An Economic Analysis of State Restrictions on Automobile Distribution," *Journal of Law and Economics*, 25: 125-157.
- Snyder, C.M. (1996) "Vertical Integration for Efficiency or Market Power? Event Studies of the US Oil Industry," George Washington University mimeo.
- Spengler, J. (1950) "Vertical Integration and Antitrust Policy" *Journal of Political Economy* 58: 347-352.
- Telser, L. (1960) "Why Should Manufacturers Want Fair Trade?" *Journal of Law and Economics* 3: 86-105.
- Vita, M.G. (2000) "Regulatory Restrictions on Vertical Integration and Control: The Competitive Impact of Gasoline Divorcement Policies," *Journal of Regulatory Economics*, 18: 217-233.

Waterman, D. and Weiss, A.A. (1996) "The Effects of Vertical Integration between Cable Television Systems and Pay Cable Networks," *Journal of Econometrics*, 72: 357–395.

Figure 1

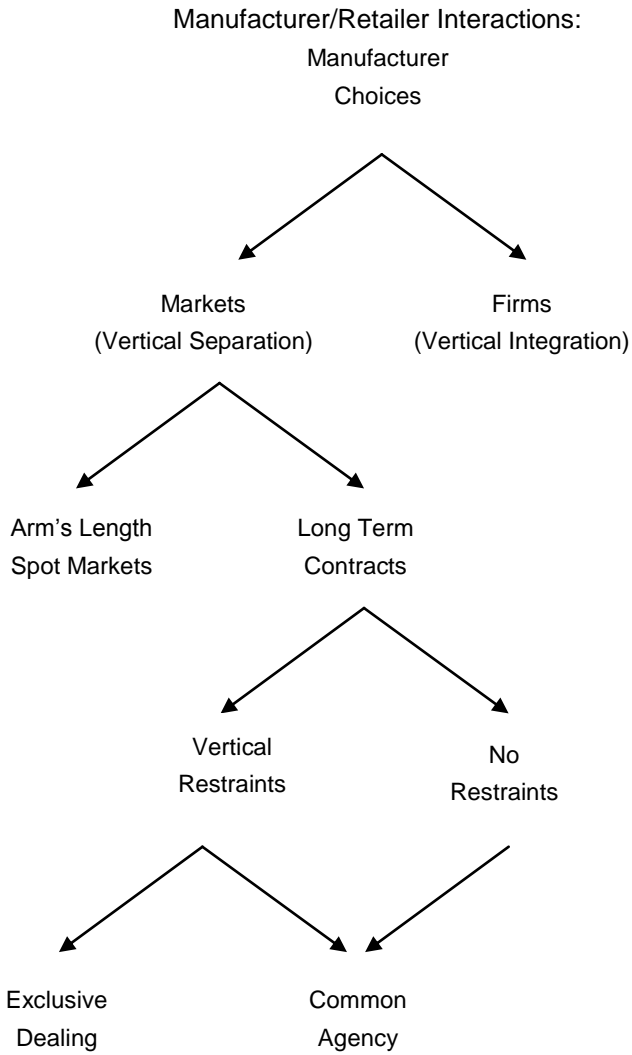


Table 1: Empirical Assessment of Effects of Voluntary Vertical Restraints

Author	Year	Industry	Variable (Y)	Effect (Y)	Effect (W)
Exclusive Dealing					
Slade	2000	Beer Retailing	Price (P_R)	+	-
Asker	2004	Beer Dist	Cost	-	+
Sass	2005	Beer Dist	Price (P_W)	+	+
			Consumption	+	
Exclusive Territories					
Jordan and Jaffee	1987	Beer Dist	Price (P_W)	+	-
Sass and Saurman	1993	Beer Dist	Price (P_R)	+	+
			Consumption	+	
Sass and Saurman	1996	Beer Dist	Consumption	+	+
Azoulay and Shane	2001	Several	Survival	+	+
Brenkers and Verboven	2006	Auto Distribution	Price (P_R)	+	-
Tying					
Hanssen	2000	Movie Dist	Consumption	+	+
RPM					
Gilligan	1986	Many	Stock Returns	Mixed	Ambiguous
Ippolito and Overstreet	1996	Glassware	Consumption	+	+
			Stock Returns	+	
Other Restrictions					
Sourcing restrictions ^a					
Barron, Taylor, and Umbeck	2004	Gasoline	Price (P_R)	-	+
Limited distribution ^b					
Cooper	2006	Contact Lenses	Price (P_R)	No effect	No effect

Effect (Y) denotes the effect on the dependent variable.

Effect (W) denotes the effect on consumer wellbeing.

RPM denotes resale price maintenance.

P_R and P_W denote retail and wholesale prices respectively.

^a Sourcing restrictions are limitations on downstream input purchases.

^b Limited distribution is a constraint on the type of seller.

Source: Lafontaine and Slade (2008a).

Table 2: Empirical Assessment of Effects of Mandated Vertical Restraints

Author	Year	Industry	Variable (Y)	Effect (Y)	Effect (W)
Exclusive Territories					
Smith II	1982	Auto Distribution	# of Dealerships	-	Ambiguous
Culbertson and Bradford	1991	Beer Distribution	Price (P_R)	+	-
Tying					
Hass-Wilson	1987	Contact Lenses	Price (P_R)	+	-
RPM					
Ornstein and Hanssens	1987	Spirits	Price (P_R)	+	-
			License Values	+	
			Consumption	-	
Termination Restrictions					
Smith II	1982	Auto Distribution	# of Dealerships	+	Ambiguous
Brickley, et. al.	1991	Several	Stock Returns	-	-
Dealer Licensing					
Smith II	1982	Auto Distribution	Price (P_R)	+	-
			Consumption	-	
			# of Dealerships	-	

Effect (Y) denotes the effect on the dependent variable.

Effect (W) denotes the effect on consumer wellbeing.

P_R denotes retail price.

Dealer licensing is a form of entry restriction.

Source: Lafontaine and Slade (2008a).

Table 3: Assessment of Foreclosure and Raising Rivals Costs

Author	Year	Industry	Data/ Technique	Variable Examined	Finding
Foreclosure					
Allen	1971	Cement & concrete	Descriptive	Acquisitions	Foreclosure
Reiffen & Kleit	1990	Railroads & terminals	Descriptive	Access to railroad terminals	No foreclosure
Rosengren & Meehan	1994	Challenged mergers	Event study	Returns, unintegrated downstream rivals	No foreclosure
Waterman & Weiss	1996	Cable TV programming & distribution	Cross sectional regressions	Program offerings	Foreclosure
Snyder	1996	Crude oil & refining	Event study	Returns, integrated rivals	Foreclosure
Hastings & Gilbert	2005	Gasoline refining and sales	Difference in difference	Wholesale price to unintegrated rivals	Foreclosure
Gill	2007	Film distribution & exhibition	Difference in difference	Movie run length	Foreclosure
Foreclosure and efficiency					
Mullin & Mullin	1997	Iron ore & steel	Event study	Returns, downstream consumers	No foreclosure Efficiency gains
Ford & Jackson	1997	Cable TV programming & distribution	Cross sectional IV regressions	Subscription price	Foreclosure No welfare change
Chipty	2001	Cable TV programming & distribution	Cross sectional IV regressions	Program offerings price, & subscriptions	Foreclosure Efficiency gains
Hortacsu & Syverson	2007	Cement & concrete	Panel Difference in difference Probit	Concrete price Concrete production Plant survival	No foreclosure Efficiency gains

Source: Lafontaine and Slade (2007).

Table 4: Empirical Assessment of Divorcement

Author	Year	Industry	Data/ Technique	Variable Examined	Effect of Divorcement
Barron, & Umbeck	1984	Gasoline refining & sales	Difference in difference	Retail price Station hours	Price higher Hours shorter
Slade	1998	Beer brewing & sales	Difference in difference	Retail price	Price higher
Vita	2000	Gasoline refining & sales	Panel	Retail price	Price higher
Blass & Carlton	2001	Gasoline refining & sales	Cross section	Retail cost	Cost higher
Hastings	2004	Gasoline refining & sales	Difference in difference	Retail price	No difference between CC & CD

Source: Lafontaine and Slade (2007).

3 **The Antitrust Treatment of Vertical Restraints: Beyond the Possibility Theorems**

*Daniel P. O'Brien**

3.1 **Introduction**

The appropriate treatment of vertical restraints may be the most controversial subject in antitrust. This paper argues that much of the controversy would disappear if the application of economics to vertical restraints policy followed a more scientific approach than is commonly taken.

The foundation for the antitrust treatment of mergers and contracts between firms was laid by Cournot (1838). His two models of pricing, one by firms producing substitutes and another by firms producing complements, are canonical and formed the basis for a theoretical literature on the effects of vertical practices under fixed proportions that some would say was relatively settled by the 1980s. Over the last 25 years, new tools from game theory have led to models of vertical control that challenge the 1980s Synthesis. Unfortunately, this literature is comprised mostly of *possibility theorems*, with little careful discussion of when the possibility theorems are likely to apply in practice.

There is a desperate need for an *applicability* discussion to take place. Without this discussion, practitioners motivated by private or political objectives can select from a long menu of economic models

* Senior Economic Policy Advisor, Bureau of Economics, U.S. Federal Trade Commission. The Views expressed herein are my own and do not purport to represent the views of the FTC or any Commissioner. I thank Mike Vita for helpful comments. Any errors are my own.

the one that supports their position, and these positions may or may not be consistent with social objectives. The applicability vacuum also leaves well-intentioned practitioners little basis for determining how and when to intervene to achieve their objectives.

This paper takes the position that applicability should be determined by following established principles of science. Section 3.2 discusses the principles of science that I believe are appropriate for the application of economics to antitrust questions. Section 3.3 reviews the theoretical and empirical developments in the relevant science, economics, about the effects of a particular class of vertical practices – resale price maintenance (RPM), exclusive territories (ET), and forward integration by upstream firms in the fixed proportions case. While the discussion is motivated by these practices, it also touches on the role of nonlinear payments schedules and other contracting practices, as it is not possible to treat these other practices separately. Section 3.4 discusses the implications of the scientific approach for the analysis of vertical integration/restraints based on the theoretical and empirical literature. Section 3.5 concludes the paper.

3.2 Science and Antitrust

The basic approach of science is to develop theories, test them through the analysis of empirical evidence, refine or replace theories that do poorly, retest refined theories, and repeat this process perpetually, retaining as the best theory at any given time the one that is most consistent with empirical observation.¹ The branch of science

¹ The word “theory” is sometimes reserved for hypotheses that have been successfully tested, at which point they become “theories.” I follow much of the literature and ignore this distinction in this paper. I also use “theory” and “model” interchangeably. Both refer to frameworks used by scientists to describe phenomena we observe. Sometimes the term model refers to a construct within a theory that abstracts from factors that are not essential

applicable to antitrust is economics, the science consistently called on in virtually every aspect of antitrust analysis, including the development of Guidelines, the analysis of antitrust questions by staff at competition authorities, and the analysis and presentation of evidence by economic experts at trial. While some might object to calling economics a science, it unquestionably satisfies the modern definition of a science², it satisfies Popper's key demarcation of generating falsifiable theories,³ and prominent members of the economics profession see themselves as scientists.⁴

Although economics is less far along in its development than, say, mechanical physics, the fundamental principles that govern its practice are no different than the principles that govern the practice of any science. In particular, the primary criterion for assessing a scientific theory is its consistency with the phenomena it seeks to

for explaining observed phenomena. I do not make this distinction. The view taken here is that all theories in science are essentially models that do not reflect truth, but rather useful abstractions for explanation and prediction.

² Webster's dictionary defines a science as "knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through scientific method." It defines the scientific method as "principles and procedures for the systematic pursuit of knowledge involving the recognition and formulation of a problem, the collection of data through observation and experiment, and the formulation and testing of hypotheses." Economics clearly uses the scientific method as defined to develop a system of knowledge covering general truths and therefore is clearly a science by Webster's definition.

³ Popper (1959).

⁴ See, for example,

http://findarticles.com/p/articles/mi_m2267/is_2_71/ai_n6157387/pg_3,
<http://gregmankiw.blogspot.com/2006/05/is-economics-science.html>,
<http://kuznets.harvard.edu/~aroth/econsci.html>, and
<http://kuznets.harvard.edu/~aroth/Plott.html>.

explain. This principle is fundamental to all of science, and it applies equally well to economics.

While consistency of theory with evidence is paramount, it must be admitted that this principle is harder to apply in economics than in some of the better-developed physical sciences. There are probably two reasons for this. First, the empirical literature in some areas of economics is underdeveloped, so some theories have not been adequately tested.⁵ Second, the best economic theory for a particular situation may depend on institutional details specific to the situation. To the extent the environment in an investigation differs from the environments in which empirical work has been conducted, the relevance of the empirical work for the investigation may be weakened. It is even possible that the best theory has not been developed because the specific institutional details have not previously presented themselves, in which case the most relevant theory will not have been tested.

These factors mean that policy authorities face significant uncertainty in determining which theory is likely to make the best predictions in a given case. A useful, and widely-accepted, scientific approach to decision-making in uncertain environments is Bayesian decision theory. Under this approach, the policy authority begins with a prior belief about the likelihood that a business practice is anticompetitive. This “prior” should be informed by existing empirical literature. The authority then updates this belief based on evidence gathered during the course of an investigation. Finally, the authority makes a decision based on the updated likelihood that the

⁵ A key issue is the difficulty of conducting controlled experiments. Although the use of experimental methods in economics is progressing, most empirical work still relies on the econometric (statistical) analysis of historical data. Econometric tests based on historical data are typically subject to greater uncertainty than experimental work in the physical sciences.

practice will be anticompetitive by minimizing a loss function that accounts for losses associated with type I and type II errors.⁶

In conducting the second step – updating the prior beliefs – at least two types of evidence seem relevant. First, the investigation itself may present empirical information about the likely effects of the practice. For example, if RPM was adopted because of a change in the law, its adoption may offer a “natural experiment” useful for evaluating the effects of the practice.⁷ Consistent with the principles of science, I would argue that case-specific empirical evidence, such as that obtained from a good natural experiment, should take precedence over other case-specific criteria in choosing among competing theories.

Of course, good natural experiments are rare. A second type of evidence relates to the *reasonableness* of the assumptions that form the basis of the theory. This criterion is less objective than good empirical evidence because it may not be obvious which assumption is most reasonable. However, when the only theories available for decision-making have not been convincingly distinguished by empirical work, the reasonableness criterion seems useful.

Two additional factors have a role in choosing among competing theories. The first is Occam’s razor, or the “principle of parsimony,” which recognizes benefits from keeping theory as simple as possible. Among theories that predict equally well, the simplest is preferred. Of course, “theory should be as simple as possible, but not simpler.”⁸ Another factor is the *robustness* of the theory to small changes in the assumptions, especially over the set of assumptions that seem equally reasonable. Other factors equal, it seems reasonable to argue

⁶ See Cooper et al. (2005) and Heyer (2005) for discussions of the role of Bayesian decision theory in the analysis of vertical integration/restraints.

⁷ This example assumes that the change in the law is exogenous, or that its potential endogeneity is treated with an appropriate econometric technique.

⁸ This paraphrases a famous statement by Einstein.

that theory A is better than theory B if it is more robust to changes in assumptions that are equally plausible.

3.3 A Condensed History of Scientific Developments in the Analysis of Vertical Integration/Restrains under Fixed Proportions

3.3.1 1776-1838 – *The Fundamental Theorem of Antitrust*

The foundation for modern antitrust was formed concurrently with the development of modern economics, beginning with the work of Smith (1776) and Cournot (1838). The work of Cournot, in particular, implies what I like to refer to as the fundamental theorem of antitrust: *Combining substitutes is bad, and combining complements is good, unless demonstrated otherwise.*⁹ Today, 170 years after Cournot's book was published, Cournot's research remains the most influential and most important work in the history of antitrust. The relevance of this theorem for the antitrust treatment of vertical restraints and integration will become clear.

The idea for which Cournot is most famous is now known as Cournot oligopoly. In this theory, two or more firms compete by independently choosing quantities. The market price is determined from an inverse demand function assumed to be decreasing in aggregate quantity. In a Cournot equilibrium (now known as a Nash equilibrium to the Cournot game), each firm chooses its quantity to maximize its profits given the quantities chosen by rivals. Since demand is downward sloping, an increase in quantity by one firm

⁹ This is intended to be a colloquial statement of the idea that in the first, simplest, and now canonical models of oligopoly, collusion (or merger) between substitutes tends to raise price, while collusion (or merger) between complements tends to lower price.

lowers the market price, reducing rivals' profits. Each firm ignores this *horizontal externality* when choosing its own quantity, so in Cournot equilibrium, aggregate quantity is higher and joint profits are lower than they would be if firms chose quantities collusively, or if a fully integrated monopolist chose all quantities.

Despite its age, the Cournot model is a pillar of modern antitrust economics. It was the first and remains the simplest rigorous explanation why horizontal mergers and collusion tend to raise price and reduce welfare. It provides the motivation for one of two classes of unilateral effects discussed in the U.S. Merger Guidelines.¹⁰ It provides the underlying stage game for the theory of collusion that motivates the discussion of coordinated behaviour in the U.S. Merger Guidelines.¹¹ It underlies many of the models in the most recent rigorous survey of the theoretical literature on oligopoly, which refers to the new models as integrating "old ideas and new tools."¹²

The other idea for which Cournot is famous, though perhaps less so, is the theory of Cournot complements.¹³ In this theory, two or more firms produce products that are perfect complements with each other, meaning that consumers derive benefits only if they consume the bundle of all products. The demand for each product is the same as the demand for the bundle and depends on the "full price" of the bundle, which is the sum of prices of the individual products. In the

¹⁰ Section 2.22 of U.S. Merger Guidelines (1997) discusses the unilateral effects of mergers among firms distinguished primarily by their capacities. The ideas in that section can be motivated by a model of Cournot oligopoly with capacity constraints.

¹¹ Much of the discussion of coordinated effects in Section 2.1 of the U.S. Merger Guidelines is motivated by ideas in Stigler (1964). Friedman (1971) and Green and Porter (1984), have developed models of repeated Cournot oligopoly that formalize and substantially expand on Stigler's ideas about tacit collusion.

¹² Vives (1999).

¹³ Cournot complements arise frequently in the patent literature (e.g., Shapiro, 2001).

two product case, the full price is $P_F = P_A + P_B$, where P_A and P_B are the prices of products A and B respectively. In Cournot complements equilibrium, each firm chooses its price to maximize its profits given the price chosen by the other firm. Since an increase in either P_A or P_B increases the price of the bundle, it reduces demand and profits of the complementary producer. Each firm ignores this *vertical externality*¹⁴ when choosing its price to maximize its own profits, so prices are higher and profits are lower in Cournot complements equilibrium than they would be if firms colluded, or if a fully integrated monopolist set all prices. Note that this is precisely opposite of the outcome that arises under Cournot oligopoly with substitute products. Under Cournot oligopoly, joint pricing raises price; under Cournot complements, it lowers price.

Despite its age, the Cournot complements model is also a pillar of modern antitrust economics. It was the first and remains the simplest rigorous explanation why conglomerate mergers between producers of complements are less likely than horizontal mergers to harm competition. It is closely related to the simplest model of vertical integration discussed below.

Cournot's canonical models are most important for the fundamental principles they imply, principles that have empirical support¹⁵ and have stood the test of time. The fundamental insight of Cournot oligopoly is that independent pricing by rivals leads to lower prices and greater output than joint pricing, other factors equal. Although Cournot demonstrated this principle for environments in which firms compete by choosing quantities, we now know that this insight is robust to whether firms compete by choosing

¹⁴ The rationale for calling this a "vertical" externality is that it is closely related to the externality that arises with linear pricing in the typical vertical model, as explained in more detail below.

¹⁵ See Pautler (2003) for a survey of the empirical work on horizontal mergers. Evidence that the joint pricing of complements reduces price is found in Baron and Umbeck (1984), (1985); Shepherd (1993); Vita (2000); and Mortimer (2008).

quantities or prices.¹⁶ The fundamental insight emerging from of the Cournot complements model is that independent pricing by producers of complements leads to higher prices and lower output than joint pricing. Although Cournot demonstrated this principle for environments in which the only strategic variable is price, subsequent work has shown that analogous results emerge when firms make independent investment decisions that enhance the value of the bundle. In such cases, firms invest less when they make investment decisions independently than when they do so jointly.¹⁷

The fundamental principles that emerge from Cournot's canonical models form the basis for the fundamental theorem of antitrust. I obviously think this is an important principle, or I would not have spent so much time on it. The next two subsections show that this principle remained unscathed 150 years after Cournot's work.

3.3.2 1838-1950 – The Basic Vertical Relationship

There is a close relationship between Cournot complements and the simplest vertical relationship – successive monopoly. Suppose that instead of selling complementary products to final customers, firms A and B are in a vertical relationship, with firm A producing an input used by firm B in fixed proportions to produce a final product. If A's price is P_A and B's markup over P_A is $P^{R_B}(P_A)$, then the full price

¹⁶ See, e.g., Bertrand (1883), Kreps & Scheinkman (1983), Hotelling (1929), Davidson & Deneckere (1985). It is well-known that price and quantity competition have differences that are important in some contexts. For example, quantities are normally considered *strategic* substitutes, while prices are normally *strategic* complements (See Fudenberg & Tirole, 1984, and Bulow et al., 1985). However, this difference does not affect the nature of the horizontal externality driving the result that the joint pricing of substitutes tends to raise price.

¹⁷ See, e.g., Holmstrom (1982).

paid by consumers is $P_F = P_A + P^{R_B}(P_A)$. Observe that an increase in either P_A or the schedule $P^{R_B}(P_A)$ raises the full price paid by consumers, reducing the quantity demanded of the final product, and thus reducing the demand and profits of the other component of the bundle. The nature of this *vertical externality* is qualitatively similar to the externality that arises under Cournot complements, and the effect of the externality is qualitatively similar. Note further that $P^{R_B}(P_A)$ is increasing, so that an increase in the upstream price P_A induces the downstream firm to raise its price P_B . This fact combined with the vertical externality means that the full price will be higher when firms A and B set prices independently than when they set prices jointly or if a fully integrated monopolist set both prices.

This result is generally credited to Spengler (1950), who was the first to examine successive monopoly rigorously. Spengler showed that vertical integration between successive monopolists eliminates the vertical externality (“double-marginalization”), leading to lower prices.¹⁸

Although Spengler did not draw the connection, the relationship between his model of successive monopoly and Cournot’s model of complements is very close. In game theoretic language, Spengler’s model is a game in which producers of perfect complements set prices sequentially, while Cournot’s model is a game in which the

¹⁸ Spengler’s article was motivated by what he saw as a mis-treatment of vertical integration by antitrust authorities:

“Recent decisions suggest that the United States Supreme Court is beginning to look upon integration as illegal *per se*, under the antitrust laws. It may be presumed, in so far as this inference is valid, that the Court believes that integration necessarily reduces competition “unreasonably”... Horizontal integration may, and frequently does, make for higher prices... Vertical integration, on the contrary, does not, as such, serve to reduce competition and may, if the economy is already ridden by deviations from competition, operate to intensify competition.”

same producers set prices simultaneously.¹⁹ While these games make slightly different quantitative predictions, the nature of the externalities and the qualitative predictions are similar.

Spengler's model has three implications for vertical practices, only one of which he explained in his paper. First, vertical integration between successive monopolists eliminates the vertical externality and lowers price – Spengler's result.

Second, one can think of a two-part tariff contract with a marginal price equal to firm A's marginal cost as effectively selling firm A to firm B at a price equal to the fixed fee. This contract gives firm B the right to produce product A at marginal cost, just as if it were integrated. In the language of the modern agency literature, this type of contract makes the agent (firm B) the residual claimant to the joint profits of the principle (firm A) and the agent, so that firm B has an incentive to maximize joint profits, just as would an integrated firm. The effect of this two-part tariff is analogous to a merger between A and B – it lowers price.²⁰ More generally, a wide range of nonlinear

¹⁹ Machlub and Taber (1960) credit Zeuthen (1930) for being the first to recognize this equivalence. Formally, in the vertical model, firm A's profits are $\pi_A = (P_A - c_A)D(P_B^R(P_A))$ where c_A is firm A's marginal cost and $P_B^R(P_A)$ is firm B's reaction to P_A . Firm B's profits are $\pi_B = (P_B - P_A - c_B)D(P_B)$. In equilibrium, firm B chooses P_B to maximize π_B , and firm A chooses P_A to maximize π_A . Consider a change of variables with $M_B = P_B - P_A$ and $M_B^R(P_A) = P_B^R(P_A) - P_A$. Substituting these into the profits of firms A and B gives $\pi_A^* = (P_A - c_A)D(P_A + M_B^R(P_A))$ and $\pi_B^* = (M_B - c_B)D(P_A + M_B)$. Under this change of variables, the set of prices that maximize π_A^* and π_B^* are the same as the set of prices that maximize π_A and π_B . Note further that the former set of prices gives the solution equilibrium to the sequential complements game, with firm B's markup being its component of the price, while the latter set gives the solution to the vertical game. Therefore, the two games are equivalent.

²⁰ Machlub and Taber (1960) credit Henderson (1940) for this result.

contracts can be used to induce the fully integrated outcome, including quantity forcing, an all or nothing quantity offer, or volume discounts.

Third, the vertical externality arises because firm B adds an additional margin to the price of component A. Firm A can eliminate this extra margin by using resale price maintenance to constrain firm B's margin to zero. Under this constraint, firm A effectively becomes an integrated monopolist because firm B's product will be sold at marginal cost. (RPM effectively sells firm B to firm A, the flipside of using a two-part tariff to sell firm A to firm B.) The effect is again analogous to a merger between A and B, i.e., RPM lowers price.

The biggest contribution of the successive monopoly model to the literature, in my view, is to show that Cournot's insight that the joint pricing of complements leads to lower prices extends to the sequential pricing of complements that occurs between firms in a vertical relationship. The state of the scientific literature as of Spengler's 1950 paper was consistent with the fundamental theorem of antitrust. It appears that the only significant insights in the more than 100 year period between Cournot and Spengler were that integration and certain more complex contracts – nonlinear pricing and RPM – can solve the double mark-up problem.

3.3.3 1950-1984 – The Circa 1984 Synthesis (The “Chicago” Synthesis)²¹

Through the time of Spengler’s paper, the literature did not systematically address the motivation for vertical restraints/integration in situations in which either the upstream or downstream market was competitive. Thus, the literature associated with the fundamental theorem could not explain exclusive territories. In addition, Spengler’s model explains price ceilings (*maximum* RPM), but it does not explain why manufacturers would impose price floors (*minimum* RPM). Indeed, in Spengler’s model, a binding retail price floor would hurt the manufacturer by reducing its sales.

1. Early “Chicago School” Contributions.

Around the time of Spengler’s paper, a group of economists and lawyers at the University of Chicago associated with the teachings of Aaron Director began publishing articles in law and economics journals discussing the effects of vertical integration and restraints. Bork (1954) appears to have been the first to articulate carefully the idea that an upstream monopolist selling a product used in fixed proportions by competitive downstream suppliers has nothing to gain by integrating forward.²² The idea is that the monopolist can

²¹ I am reluctant to follow the literature and use the phrase “Chicago Synthesis” because it has wrongly come to be associated with an unscientific, “non-interventionist” view toward the antitrust treatment of vertical practices. In fact, the Chicago Synthesis is nothing more than a collection of implications of rigorous economic models of vertical control. So I will simply refer to the state of the literature at the end of the period discussed in this section as “Circa 1984 Synthesis.”

²² Bork is credited for this point by McGee and Bassett (1976), although they and Bork note that seeds of the ideas were at least partly developed by Aaron Director, Adelman (1949) and a student comment in the University

charge the wholesale price that induces the fully-integrated monopoly price as the outcome of downstream competition. Since downstream firms are competitive, the profits accrue to the upstream monopolist. This line of reasoning is sometimes referred to as the “one-monopoly-rent” idea, since the intuition for the result is that there is only one monopoly rent available, and the upstream firm can capture it by charging the appropriate wholesale price. There is no incentive for vertical integration or vertical restraints in this situation other than potential efficiency gains.

The work of Spengler and Bork (along with others influenced by Aaron Director) forms the basis for the early Chicago reasoning on vertical control under fixed proportions, which was as follows. A monopoly manufacturer may wish to vertically integrate or write contracts more complex than linear prices if it sells to a downstream firm with market power. Such integration, whether explicit or through contract, is efficient (because it eliminates the vertical externality). If the monopolist sells to a competitive downstream market, it has no incentive to integrate unless doing so results in cost savings. So under the early Chicago reasoning, apart from possible regulatory evasion motives or adverse horizontal consequences, vertical integration under fixed proportions (explicit or through contract) was deemed good.

2. Non-price Retailer Decisions

The early Chicago models still could not explain why manufacturers would want to use minimum RPM or ET. In a famous paper titled “Why Would Manufacturers Want Fair Trade,” Telser (1960) pointed out that if retailers provide costly point-of-sale services that increase the demand for the product, and if customers can obtain these services from a retailer other than the one from whom they purchase

of Chicago Law Review (Comment, 1952) that undoubtedly reflected Director’s teachings.

the product, then unfettered retail competition causes a free-rider problem that can lead to the under-provision of services.²³ The problem is that if retailer A provides a service and charges a price that covers the cost of the service, then a rival retailer B can offer the product without providing the service at a lower price and attract customers that obtain the service from retailer A. This gives rise to what Mathewson and Winter (1984) and Winter (1993) refer to as another *horizontal externality* in models of vertical control: retailer A does not appropriate the change in total system profits that results from the cross elasticity effects of its service provision. All retailers that might provide the service face the same issue. In equilibrium, service provision ends up below the amount a fully integrated monopolist would provide, since an integrated firm would internalize the horizontal externality.

Telser pointed out that a non-integrated manufacturer can avoid this problem by imposing minimum RPM. If retailer B cannot charge a lower price than retailer A, then it cannot attract customers that obtain services from retailer A. Presumably, such customers would also purchase the product from retailer A if there were any cost of visiting a second retailer. Using minimum RPM, the manufacturer can select margins that give retailers the same incentives to produce services as a fully integrated firm, inducing them to choose the joint profit-maximizing level of service.

Note that in Telser's model, nonlinear contracts alone do not solve the horizontal externality problem, and if retailer services were not an issue and the downstream market was competitive, nonlinear contracts would not be needed either. So in the literature through Telser's contribution, the only known role for nonlinear contracts was to solve the vertical externality (double marginalization) problem.

Subsequent literature formalized the role of nonlinear contracts by examining environments with downstream oligopoly (or

²³ Telser notes that Yamey (1954) and Bowman (1955) developed aspects of the services argument.

monopolistic competition). In such environments, linear wholesale pricing still leads to double-marginalization, albeit not as severe as in successive monopoly. An implication of the framework developed in Mathewson and Winter (1983a, 1983b, 1984) is that if oligopoly retailers compete in prices but do not make demand-enhancing investments, then *observable, take-it or leave-it two-part tariff* contracts are sufficient to induce the fully integrated outcome.²⁴ The idea is that an n-dimensional vector of wholesale prices is sufficient to induce the optimal n-dimensional vector of retail prices, and fixed fees (e.g., franchise fees) are sufficient to transfer surplus. In a sense, this result extends the early Chicago work regarding the effects of vertical control by a monopolist to the case of downstream oligopoly. The manufacturer does not benefit from vertical integration or other vertical restraints in this environment if observable two-part tariffs (more generally, observable nonlinear contracts) are feasible.

Mathewson and Winter (1984), and later Winter (1993), also generalized Telser's results regarding the role of vertical restraints when retailers make both price and service decisions. When retailers compete as oligopolists in such an environment, two-part tariffs are no longer sufficient to induce the fully integrated outcome. As in Telser, additional restraints are needed. Mathewson and Winter distinguish two cases, one in which a retailer's service investment affects only its own demand ("no-spillovers"), and one in which the investments increase rival demand (spillovers). When there are no spillovers, they find that exclusive territories (ET) with a franchise fee or quantity forcing (i.e., ET with a non-linear contract), or minimum RPM with a per-unit wholesale price are sufficient to achieve the fully integrated outcome. When there are spillovers, they find minimum RPM in conjunction with franchise fees achieves the fully integrated outcome, but that ET does not. Note that the spillovers case is analogous to the free-riding case that Telser focused on. In both cases, rival retailers benefit from an increase in service by a particular retailer.

²⁴ See also Dixit (1983).

An extremely important implication of this literature, and one that is often forgotten in policy discussions, is that *non-price retail decisions do not have to be subject to free-riding to explain vertical restraints*. As Mathewson and Winter showed, a manufacturer has an incentive to use either minimum RPM or ET to induce demand-enhancing investments even when these investments do not spill-over to rivals, i.e., when they are not subject to free-riding. The motivation for vertical restraints arises when two conditions are satisfied: 1) retailers make costly, non-contractible decisions that affect demand (or cost, though the literature has focused on demand); and 2) retailers face competition, so that their price-cost margins differ from those of a fully integrated firm.²⁵ Under these conditions, the horizontal non-price externality – failure of retailers to appropriate the change in total system profits that results from their non-price decisions – will be present. Typically, this externality will cause retailers to invest less in demand-enhancing activities than would a fully integrated firm. Minimum RPM or ET can be used to give retailers a sufficient profit stream to induce them to choose the same investments a fully integrated firm would make.

Other non-contractible, non-price retailer decisions have also been shown to motivate vertical integration and restraints. RPM may be used to induce retailers to make investments in quality certification.²⁶ RPM may be used to influence the number retail entrants or the amount of product variety at the retail level. The idea is that the retail margin affects incentives for retailers to make the investments necessary to enter the market.²⁷ RPM can also be used to

²⁵ Downstream competition is not required if the upstream firm also makes costly, non-contractible decisions that affect demand, in which case the situation is one of “double moral hazard” (see 2.3.4.5 below).

²⁶ Marvel and McCafferty (1984).

²⁷ For an early treatment, see Gould and Preston (1965). For rigorous economic treatments, see Mathewson and Winter (1983b), Dixit (1983), and Perry and Groff (1985). These studies focus on the retailer entry decision,

encourage retailers to hold higher inventories to avoid stock-outs in the presence of uncertain demand.²⁸

The welfare effects of vertical restraints used to encourage non-price retail effort are ambiguous for reasons that are well-understood in the product selection literature. The problem is that there is no guarantee a firm with market power will choose the socially optimal level of demand-enhancing activities.²⁹ However, it is hard to imagine condemning vertical restraints used to increase retailer effort because of concerns that this effort might harm welfare.³⁰ A

but it seems clear that a similar analysis would apply to the incentives of existing retailers to stock a manufacturer's product.

²⁸ See, e.g., Deneckere et al. (1996).

²⁹ See Spence (1975).

³⁰ In a recent Amicus Brief to the United States Supreme Court, Comanor and Scherer (2007) state: "The assertion that output-expanding resale price maintenance enhances consumer welfare, often cited as a defense of RPM, should be recognized as a special case not applicable under plausible conditions." This statement is technically correct for reasons that have been known since the work of Spence (1975), but it hard to see its practical relevance. Just as a firm with market power may choose a socially excessive level of demand-enhancing effort (quality, point of sale service, etc.), so may an upstream firm using RPM induce retailers to engage in socially excessive effort. However, the determination of whether effort is excessive requires *global* information on demand, including how retail effort affects *all* consumers, including the "inframarginal" consumers whose purchase decisions would not change in response to small changes in price and retail effort. It is difficult to imagine that such estimates could be developed in an antitrust investigation, and even if they could be, the prospect that they would be sufficiently precise and robust to draw conclusions about whether retail effort was too high or too low is exceptionally dim. For this reason, antitrust authorities ought not prohibit RPM on the grounds that a firm might induce socially excessive retail effort, just as they ought not (and do not) condemn firms for potentially excessive private investments.

similar argument would justify condemning investments in quality made by any firm with market power.

An important implication of this class of models is that the competitive effects of vertical integration or restraints used to motivate retail effort cannot be determined from evaluating the effects on the retail price alone. In fact, in these models, minimum RPM can raise or lower the retail price. If the additional retailer effort induced by RPM makes demand more (less) elastic, then RPM will reduce (raise) the retail price.³¹

3. Collusion

The Circa 1984 Synthesis did not imply that vertical integration or restraints could never be associated with anticompetitive behaviour, but rather suggested that anticompetitive consequences of vertical practices would arise from regulatory evasion or horizontal effects. One possible anticompetitive horizontal effect is collusion.³²

Telser discussed one role RPM may play in helping to sustain collusion among manufacturers, now referred to as the “manufacturer cartel theory.” His main argument was that if RPM is enforced, manufacturers have less incentive to deviate from a cartel agreement because a wholesale price reduction cannot be passed on by retailers. He argues that RPM helped sustain collusion in the

³¹ Mathewson and Winter (1984) and Marvel and McCafferty (1985), (1986) all observed that RPM used to motivate retailer effort has an ambiguous effect on price.

³² Another potential horizontal effect not treated in this paper is the foreclosure of upstream rivals through the monopolization of distribution. This type of foreclosure was recognized by the early Chicago School (see, e.g., Comment (1952), p. 613) and in the 1984 U.S. Non-Horizontal Merger Guidelines and is sometimes referred as the “two-level entry” story of harm from vertical mergers. The modern literature recognizes this as a possible effect from vertical integration, exclusive dealing, or tying when there are economies of scale in the upstream market. See Cooper et al. (2005).

conspiracies among manufacturers of light bulbs and ethyl in the early 1900s.³³ Telser's ideas about the potential collusive effect of RPM were formed without the benefit of game-theoretic literature on the requirements for successful collusion. Another argument frequently made in informal discussions, and which has recently been formalized by Jullien and Rey (2007) (discussed in more detail below), is that RPM makes it easier to detect deviations from a collusive agreement. The idea is that if retail prices are easier to observe than wholesale prices, then RPM may make it easier to detect and punish defections from a collusive agreement.

Telser also mentions what has become known as the "retail cartel theory" of RPM, which holds that retailers that cannot collude by themselves may be able to do so if they can convince a manufacturer to enforce RPM at collusive prices. This theory may have intuitive appeal, but it begs the question of why the manufacturer would want to help to enforce such a cartel, since its profits increase when retailers violate the RPM agreement. For the manufacturer to have an incentive to enforce RPM, it would have to fear retaliation for failing to do so. But if retailers can punish the manufacturer for failing to enforce RPM, it is not clear why they would not also be able to punish each other for cutting price in a cartel enforced without RPM. Thus, it is not obvious what RPM contributes to retailers' abilities to enforce a retail cartel. To my knowledge, the retail cartel argument has not been examined formally in the literature.³⁴

³³ See *United States v. General Elec. Co.*, 272 U.S. 476 (1926) and *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436 (1940).

³⁴ Scherer and Ross (1990) observe that examples in which RPM facilitates cartels are few and far between. In discussing the manufacturer cartel theory, they note "[a]lthough the logic is persuasive, there are few documented cases of the use of RPM to strengthen manufacturer cartels" (p. 550). The only example they cite is the U.S. electric lamp manufacturer's cartel, and they label this a "prominent probable exception" (p. 551). In discussing the retail cartel theory, they state, "studies of numerous RPM cases suggest that only a minority, and perhaps a small minority, of the

4. State of Science through the Circa 1984 Synthesis

The fundamental theorem of antitrust remained intact through the Circa 1984 Synthesis nearly 150 years after Cournot. The state of the scientific literature was as follows. Absent cost savings, horizontal integration (through merger or contract) in concentrated markets with barriers to entry was deemed likely to be anticompetitive. On the other hand, vertical integration, through merger or contract, was deemed likely to be procompetitive. The post-Cournot developments supporting this conclusion include 1) establishing the qualitative equivalence between the Cournot complements and vertical relations (Zeuthen, Spengler), 2) allowing for different types of rivalry in the downstream market (Director/Adelman/Bork, Dixit, Mathewson and Winter), and 3) allowing for observable, nonlinear contracts offered by the manufacturer on a take-it or leave-it basis (Dixit, Mathewson and Winter). To be sure, the theories supporting these conclusions at the time of the Synthesis had not been subjected to rigorous testing; empirical work came later. However, the theories presumably were built on the set of assumptions that seemed most reasonable at the time they were developed.

It is instructive to understand the fundamental theorem by the nature of externalities that motivate it. Cournot identified the horizontal and vertical pricing externalities that explain why joint pricing by producers of substitutes raises price and joint pricing by producers of complements lowers price. One can describe the literature on vertical control over the next 150 years as examining what happens when these externalities are combined in models with a single seller distributing through multiple retailers who also face

adoptions for particular products came as a primary consequence of organized dealer pressure" (p. 550). See Ippolito (1991) for a survey of empirical evidence from cases. She concludes that collusion theories were potentially applicable to at most 15% of the cases in her sample.

horizontal and vertical externalities relating to non-price decisions. The literature explains that a seller may use vertical restraints to internalize these externalities and achieve the same outcome it would achieve if it were fully integrated.

3.3.4 1984 – Present: The Last 25 Years

Advances in the theory of vertical restraints since the Circa 1984 Synthesis have arisen from analyses that consider different assumptions about the nature of upstream and downstream competition, the contracting process, non-price retailer decisions, and the information structure. I will describe the main themes in this literature.

1. Cost and Demand Uncertainty/Retailer Risk Aversion

Rey and Tirole (1986) examine the private and social effects of RPM, ET, and retail competition when a monopoly manufacturer offers take-it or leave-it two-part tariffs to retailers prior to the realization of demand or retail cost uncertainty. Two new aspects of vertical contracts become important in this uncertain environment: 1) risk sharing, and 2) the ability of firms to respond optimally to changes in market conditions. Rey and Tirole point out that retail competition with no restraints transfers risk to the manufacturer, but does not allow retailers to respond optimally to changes in demand. Weighing these factors, the manufacturer chooses competition when retailers are extremely risk averse because the risk sharing benefits outweigh the cost of suboptimal responses to changes in market conditions. This is also the socially optimal choice in this case. However, when retailers are risk neutral, the manufacturer imposes ET, and welfare is lower than it is under retail competition. The manufacturer prefers ET because combining it with an efficient two-part tariff allows retailers to respond to cost and demand shocks in the same way as a vertically integrated monopolist. Welfare is higher under retail

competition than ET because consumption is more responsive to cost and demand uncertainty under competition, and consumer surplus is convex and therefore increasing in the variance of consumption.

2. Strategic Motives for Vertical Integration

In the late 80's a literature emerged examining the effects of vertical mergers and restraints when there is rivalry in both the upstream and downstream markets. Salinger (1988) examined vertical mergers in a market with Cournot oligopolists at both stages of production. In this model, a vertical merger eliminates the double-marginalization distortion between the integrating firms, which tends to increase output, other things equal. A merger may or may not lead to higher input prices for non-integrated downstream firms. If it does, the net effect of the merger depends on the size of this effect relative to reduction in double marginalization. If the merger does not lead to higher input prices for non-integrated downstream firms, then it lowers the final price and increases welfare.

Subsequent work examines vertical integration by oligopolists under different assumptions about the oligopoly game at each stage. Ordover et al. (1990) model the effects of vertical integration assuming homogeneous Bertrand duopolists upstream and differentiated Bertrand duopolists downstream. They argue that integration between one upstream and one downstream firm raises final good prices. Their results have been criticized as relying on the assumption that the vertically integrated entity can somehow commit to competing less aggressively for sales to the non-integrated downstream firm in the post-merger environment. Without this assumption, the predictions of higher prices no longer hold.³⁵ Subsequent work related to the Ordover et al. model focuses on factors that effectively endogenize firms' abilities to commit to compete less aggressively following integration.³⁶

³⁵ See Reiffen (1992) and Hart and Tirole (1990).

³⁶ See, e.g., Choi and Yi (2000) and Chen (2001).

Reiffen and Vita (1995) examine the case of N Cournot oligopolists in the upstream market and differentiated Bertrand duopoly in the downstream market. Under linear demand, constant marginal cost, and symmetry, they find that a vertical merger: 1) decreases the final price of the integrating firm, 2) may increase or decrease the cost (input price) and/or the final price of the non-integrated rival, and 3) always raises consumer surplus. In this model, the down-ward pressure on final prices from eliminating the double mark-up more than offsets the effects of higher prices (when they arise) to non-integrated rivals. In this model, vertical integration is unambiguously good for consumers.

3. Strategic Motives for Vertical Separation and Restraints

The trade-off from vertical integration in the Salinger and Reiffen/Vita models is typical whenever upstream margins are positive, which is typical in imperfectly competitive markets. The use of nonlinear contracts can mitigate double-marginalization, but it does not necessarily eliminate it. One reason is that the mark-ups in nonlinear contracts can be used strategically by rivals to influence the competition between them. The literature on strategic agency (e.g., Ferhstmann and Judd, 1987; Sklivas, 1987; Bonanno and Vickers, 1988) compares the profitability and price effects of vertical integration versus vertical separation (purchasing from an independent supplier) when firms can write observable two-part tariff contracts with exclusive agents. Bonanno and Vickers, for example, consider the case of differentiated Bertrand competition. For this case, vertical separation typically is more profitable and leads to higher prices than vertical integration. The idea is that vertically separated firms can write observable two-part tariffs with wholesale prices above marginal cost that induce less aggressive competition by their rivals. Integrated firms, on the other hand, transfer the input internally at cost.

Drawing on work in the strategic agency literature, Shaffer (1991) and Rey and Stiglitz (1995) examined the effects of RPM (Shaffer)

and ET (Rey and Stiglitz) in an environment in which competing manufacturers sell through downstream retailers with market power. Both papers find conditions under which vertical restraints may be used to soften competition. In Shaffer, two differentiated retailers purchase from a competitive upstream market. Absent restraints, if contracts are restricted to linear wholesale prices, or if two-part tariff contracts are feasible but unobservable, the equilibrium yields wholesale prices equal marginal cost. The outcome is the same as would occur if the downstream firms were each vertically integrated. However, if observable two-part tariff contracts are feasible, the equilibrium involves slotting allowances (negative fixed fees) and wholesale prices above marginal cost, leading to higher retail prices than when slotting allowances are not allowed. The competition-softening role of slotting allowances is analogous to the role of two-part tariffs and vertical separation in the strategic agency literature, although the rents accrue to retailers instead of the manufacturers in Shaffer's model because he assumes upstream competition. Finally, if wholesale prices are unobservable but RPM is observable, equilibria exist in which RPM is imposed on one retailer, committing it charge the Stackelberg leader price. RPM softens competition between retailers, leading to higher prices. The welfare cost slotting allowances and RPM appears to be small, however. In Shaffer's linear demand example, it is always less than 3 percent for slotting allowances and always less than 1.5 percent for RPM.

In the strategic agency literature, the ability to soften competition with observable contracts requires that the downstream firms have market power. Absent market power, a contract with a higher wholesale price would not soften competition because retailers would face too much competition. Rey and Stiglitz exploit this idea and show that observable two-part tariff contracts accompanied by ET, which gives downstream firms market power, lead to softer competition than without ET. Again, the idea exploits the insights of the strategic agency literature. If retailers use two-part tariffs and wholesale prices are observable, ET softens competition. If wholesale

prices are linear, ET can lead to higher prices even if wholesale prices are unobservable, although ET is unprofitable in this case if the double marginalization problem is severe enough.

The results in the strategic agency literature are quite fragile. In Shaffer, RPM is profitable only if wholesale prices are unobservable and the retail prices specified in the RPM contracts are observable. A retailer with an RPM contract would gain if it could secretly dispense with or fail to enforce RPM. In Rey and Stiglitz, ET has no effect if firms can write unobservable two-part tariffs, and it would be procompetitive if downstream firms' strategies were strategic substitutes rather than complements (e.g., if they were Cournot competitors instead of differentiated Bertrand competitors).

4. Contracting Externalities I – Unobservable Contracts

Hart and Tirole (1990), O'Brien and Shaffer (1992), McAfee and Schwartz (1994), and Rey and Vergé (2004) examined an environment in which manufacturers write non-linear contracts with downstream firms that are *unobservable* to intrabrand rivals. These authors find that this seemingly minor change in the contracting environment – making contracts private information – has large implications for the set of equilibrium outcomes, with potentially important implications for the effects of vertical integration and restraints.

O'Brien and Shaffer explore the role of vertical restraints by an upstream monopolist selling through differentiated Bertrand competitors. Their model is similar to that of Mathewson and Winter (1984) except that retailers do not make any non-price decisions and contracts are unobservable to rivals. In this environment, they point out that there are multiple equilibria to the take-it or leave-it game that vary according to each retailer's beliefs about its rivals' contract offers when it receives an out-of-equilibrium offer. To circumvent this problem, they define a *contract equilibrium* as a set of contracts

that are immune from profitable bilateral renegotiation.³⁷ Consider the contracts that induce the vertically integrated outcome. Conditional on its contract with retailer A, the manufacturer and retailer B wish to maximize their bilateral profits, which excludes the rents that accrue to retailer A. This is an example of a *contracting externality*,³⁸ which occurs when bilateral contracting between the supplier and one retailer affects the rents that accrue to other retailers. Here the externality causes the supplier and retailer B to negotiate a lower wholesale price than the one that would induce the fully integrated outcome. It works out that the incentive to cut the wholesale price bilaterally exists for all wholesale prices above marginal cost. The incentive to cut the wholesale price disappears when wholesale prices equal the manufacturer's marginal cost, since at that point the bilateral profit of the manufacturer and retailer B is equal to the profit of an integrated retailer B, so they behave as if they were vertically integrated (i.e., set a wholesale price equal to marginal cost and split the surplus with a fixed fee). So the unique contract equilibrium involves wholesale prices equal to marginal cost.

The rather stark conclusion from this literature is that private, bilateral negotiations of nonlinear contracts can prevent the upstream firm from exercising *any* of its market power. O'Brien and Shaffer point out that vertical restraints can solve this problem. In particular, maximum RPM can be used to set retail margins to zero, eliminating the contracting externality. Minimum RPM can also work, although as O'Brien & Shaffer explain, it has to be a commitment to an industry-wide minimum price enforced by some mechanism outside the model. Absent such a commitment, the contracting externality remains. A variant of exclusive territories, closed territory distribution, can also solve the problem if the ET

³⁷ The contract equilibrium concept is due to Cremer and Riordan (1987).

³⁸ See Whinston (2006), Chapter 4 for a detailed discussion of contracting externalities.

contracts can be enforced.³⁹ ET works by preventing the rent shifting associated with lower wholesale prices, thus eliminating the contracting externality.

Other authors examine noncooperative games in different contexts in which the manufacturer makes unobservable take-it or leave-it offers and show that the contract equilibrium is equivalent to the perfect Bayesian equilibrium of the take-it or leave-it game when retailers have *passive beliefs*. Under passive beliefs, a retailer that receives an unexpected offer believes that its rivals' offers have not changed. The passive beliefs assumption has some intuitive appeal when downstream firms are Cournot competitors; in that case, the supplier has no incentive to alter its contract with retailer B if it makes an out-of-equilibrium offer to retailer A because doing so does not affect A's sales. However, with Bertrand competition in the downstream market, a new contract with B (in response to a deviant contract with A) generally does affect A's sales, and the supplier generally would want to alter its offer to B in response to a deviant offer to A. To capture this idea, McAfee and Schwartz and Rey and Vergé examine "wary" beliefs, under which a retailer that receives an unexpected offer believes that the manufacturer will change its offer with other retailers to maximize its profits given the other retailers equilibrium strategies and beliefs. Under wary beliefs, the equilibrium in the absence of restraints is not as competitive as it is under passive beliefs, but it still yields prices below the fully integrated level.

It is not difficult to show that there exist out-of-equilibrium beliefs in the take-it or leave-it game that support the fully integrated outcome. Under retailer symmetry, for example, "symmetry beliefs" (the belief that a deviate offer made to one retailer will be made to all others) leads to the integrated outcome. One can also come up with retailer beliefs that sustain equilibrium prices *above* the fully integrated price, as occurs under double-marginalization. The

³⁹ See Alexander and Reiffen (2005) for a detailed discussion of enforcement issues raised by this and other motivations for vertical restraints.

dependence of the predictions of this class of models on out-of-equilibrium beliefs is clearly a weakness.⁴⁰

5. Double Moral Hazard

Romano (1994) examines a model of successive monopoly in which both the retailer and the manufacturer make non-contractible, non-price decisions that affect demand (“double moral hazard”). In this environment, a two-part tariff alone is insufficient to induce efficient investment and pricing. If the contract makes the retailer the residual claimant, the manufacturer will under invest. If the contract specifies a higher wholesale price to increase the manufacturer’s own investment incentives, it introduces double marginalization.

This model features three vertical externalities, one relating to price, and two relating to the firms’ non-price decisions. RPM (sometimes maximum and sometimes minimum) typically mitigates the problem somewhat, but it does not induce the fully integrated outcome. Even with RPM the manufacturer has only a two-dimensional incentive device (the wholesale price and retail price) to control three targets of interest (upstream investment, downstream investment, and the retail price).

Romano does not examine the welfare effects of RPM in his model, but it seems clear that they would be ambiguous for the usual reasons in models that involve product selection. However, it is clear

⁴⁰ Rey and Vergé (2004) argue that the equilibrium with wary beliefs is attractive in part because an equilibrium with passive beliefs sometimes fails to exist. On the other hand, an equilibrium with wary beliefs is not immune to profitable bilateral renegotiation of the type considered in O’Brien and Shaffer (1992). That is, in an equilibrium with wary beliefs, a retailer could make a profitable counter-offer that the manufacturer would have no incentive to refuse. In my opinion, the question of which set of beliefs is most compelling, or, more generally, the most appropriate extensive form and equilibrium concept in this class of models is unsettled. Ultimately, it is an empirical issue.

that RPM will often enhance efficiency. For example, in the special case of no downstream moral hazard, a maximum RPM contract that squeezes the retail margin to zero will eliminate double marginalization and induce the fully integrated level of upstream investment, which will often enhance welfare.

6. Price Discrimination

Chen (1999) models an upstream manufacturer charging two-part tariff contracts to downstream retailers engaged in price discrimination in the final market. If retailers sell to, say, two different classes of customers and charge them different prices, then an input contract designed to maximize the fully integrated profits would require wholesale prices that vary by customer class. However, the manufacturer typically cannot condition the wholesale price on customer class, so two-part tariff contracts alone fail to induce the fully integrated outcome. Chen shows that either maximum or minimum RPM (depending on certain parameters) increases the manufacturer's profits. RPM alters the nature of price discrimination in the retail market, which generally has ambiguous welfare effects.

7. Contracting Externalities II – Linear Price Bargaining

Dobson and Waterson (2007) examine the effects of RPM in a model in which two differentiated manufacturers negotiate linear wholesale prices with two differentiated Bertrand retailers. They compare two regimes: industry-wide RPM, and no RPM, both with negotiated linear wholesale prices. In the regime without RPM, each wholesale price remains below the level the upstream firm would choose if it had all the bargaining power, even as the intensity of downstream competition (measured by the closeness of downstream substitution) increases. In fact, with differentiated Bertrand competition, they show that each wholesale price falls to upstream marginal cost as downstream competitors become homogenous. As

in O'Brien (1989) (discussed below), this leads to retail prices below the level upstream firms would charge if they were vertically integrated, even when the downstream market is competitive. Dobson and Waterson find that when interbrand competition is weak, or when retailers have sufficient bargaining power, RPM may raise prices, especially if intrabrand competition is intense. On the other hand, if retailers have little bargaining power and intrabrand rivalry is weak, then RPM lowers prices.

Dobson and Waterson do not endogenize firms' decisions about whether to use RPM. It is an open question when RPM would emerge in equilibrium if manufacturers made these decisions independently. They also assume that the RPM contracts are fixed prices rather than maximum or minimum prices. In their model, it is clear that the RPM constraint would bind in only one direction, but we do not know when maximum or minimum RPM would be required.

In a related model, O'Brien (1989) examines an upstream monopolist bargaining over linear input prices with N downstream Cournot oligopolists. In this model, regardless of the number of downstream firms, the equilibrium wholesale price is bounded below the price the upstream firm would unilaterally set if it had all the bargaining power. That is, downstream firms retain bilateral bargaining power irrespective of the number of firms. The intuition is that a firm's bargaining power derives from its ability to impose a loss on its bargaining partner by delaying agreement. As the number N of downstream firms grows, the loss each downstream firm can impose on the upstream firm falls, but so does the loss the upstream firm can impose on the downstream firm (since downstream profits are declining in N). For N sufficiently large (greater than 2 under linear demand), the equilibrium wholesale price is below the level that would induce the fully integrated outcome. Vertical integration restores the integrated outcome, raising price.⁴¹ In this model,

⁴¹ O'Brien never bothered to try to get this result published because he initially thought the assumption of linear input pricing made it unattractive. (Why would bargaining parties sign a contract that is inefficient given the

observable nonlinear contracts and maximum RPM can also restore the integrated outcome, and both raise price.

8. Formalization of Collusion Arguments

Jullien and Rey (2007) develop a repeated game model to examine formally the long-held intuition that RPM may make it easier for manufacturers to sustain collusion. Their argument is somewhat different Telser's however, as they focus on a special case in which manufacturers distribute through exclusive retailers. In this special case, a defection from a collusive RPM arrangement by cutting only the wholesale price (Telser's focus) is meaningless, as manufacturers have nothing to gain from such defections if RPM is enforced (because they cannot attract other retailers). A defection from a collusive agreement in Jullien and Rey is a defection from the agreed-upon retail price, or a decision not to use RPM at all.

The role of RPM in Jullien and Rey's model is as follows. Absent RPM, retail prices will respond not only to changes in wholesale prices, but also to changes in retailers' information about costs and demand, making it difficult to draw inferences from changes in retail prices about whether firms have defected from a collusive agreement. Under RPM, by contrast, changes in retail prices are known to be defections from the collusive agreement, so a break down in collusion easier to detect. This can make it easier for manufacturers to sustain collusion. RPM may also make it harder to sustain collusion, however, because it turns out that the short run gain from defection is higher and long run cost from defection is lower with RPM than without it. This effect arises because retailers respond more efficiently to demand shocks without RPM.

information structure?) Twenty years later, with greater perspective on full range of abstractions made in models like this one, he is less convinced about this point.

The welfare effects of RPM in Jullien and Rey's model are ambiguous. The reason for this is that consumers prefer stable prices over fluctuating prices in the presence of demand shocks, and RPM leads to more stable, albeit higher, prices. Depending on the parameters, the benefits of the additional stability may outweigh the cost of a higher average price. However, Jullien and Rey do find that RPM reduces welfare in environments in which firms have significant market power in the absence of RPM.⁴² This suggests that in the exclusive retailer case, the concern that RPM may enhance the scope for collusion is highest when firms have significant market power and the prospect for coordination is high even without RPM.

9. Empirical Literature

Through the Circa 1984 Synthesis there was very little empirical work on the effects of vertical restraints/integration. The Synthesis was primarily theoretical. During the theoretical expansion the past 25 years, however, empirical work also began to emerge, albeit at a slower pace than the theory. Ironically, this literature provides more support for the key insights of the Circa 1984 Synthesis than it does for predictions of the models developed over the last 25 years.

Cooper et al. (2005) reviewed 24 empirical papers published between 1984 and 2004 on the effects of vertical integration, RPM, and ET.⁴³ They make three main observations based on their review. First, there is little support in the literature for the proposition that vertical restraints or integration are likely to harm consumers.⁴⁴

⁴² Specifically, in Jullien and Rey's linear demand example, RPM reduces welfare when the equilibrium price in the absence of RPM exceeds the midpoint between marginal cost and the monopoly price.

⁴³ Cooper et al. limited their review to articles in peer-reviewed economics journals.

⁴⁴ Of all the studies they examined, only one (Ford and Jackson, 1997, a study of vertical integration between cable television franchises and cable programmers) purports to find unambiguously an instance where vertical

Second, several papers find that vertical restraints/integration benefit consumers with efficiencies plausibly attributed to the elimination of double mark-ups or cost savings. Third, some studies provide at least indirect evidence that vertical restraints sometimes are used to induce the provision of demand-increasing activities by retailers. Some of these studies also find evidence consistent with both pro-competitive and anticompetitive motivations, but none find evidence consistent only with anticompetitive motivations.

Lafontaine and Slade (2005) reviewed 23 papers on vertical integration/restraints, some of which overlap with those reviewed by Cooper et al.⁴⁵ Their sample includes 15 papers on vertical integration, RPM, and ET. All but two of these papers conclude that the restraints either benefit consumers or do not harm them. Two of the papers find that exclusive territories led to higher prices, but as Lafontaine and Slade point out, it is not possible to conclude that ET reduced welfare from this evidence because the higher prices could be associated with a higher level of dealer services, which were not measured in the studies. Summarizing the evidence they reviewed, Lafontaine and Slade state: “[I]t appears that when manufacturers choose to impose [vertical] restraints, not only do they make themselves better off, but they also typically allow consumers to benefit from higher quality products and better service provision... The evidence thus supports the conclusion that in these markets, manufacturer and consumer interests are apt to be aligned, while [government] interference in the market is accomplished at the expense of consumers (and of course manufacturers).”

Three recent papers provide additional evidence that firms have employed nonlinear or other contracting practices to mitigate double marginalization and have used vertical restraints to promote retailer

integration was harmful to consumers. And in this instance, the losses are minuscule (\$0.60 per cable subscriber per year).

⁴⁵ They include some papers that are unpublished and some published in law journals and books, which Cooper et al. did not review.

effort. Villas-Boas (2007) develops a structural model of demand and vertical contracting between manufacturers and retailers (supermarkets) of yogurt. Using a non-nested testing procedure to select from among different models of contracting, she concludes that models that predict zero margins in the wholesale market perform better than models that involve double-marginalization. This finding is consistent with the use of nonlinear pricing to eliminate the vertical externality associated with double-marginalization.⁴⁶

Mortimer (2008) studies the introduction of revenue sharing contracts between video distributors and retailers in the video rental industry. Prior to 1998, videos were sold via simple linear price contracts. Beginning in 1998, revenue sharing contracts were widely adopted. She finds that revenue sharing reduced prices and increased upstream and downstream profits by 10 percent. This is consistent with the theoretical prediction that revenue sharing mitigates the vertical externality associated with double-marginalization.

In a forthcoming paper, Zanarone (2009) studies the effects of a 2002 European regulation that prohibited the use of ET in automobile franchise contracts in Italy. Following the prohibition, automobile manufacturers introduced standards on verifiable marketing and service inputs, such as advertising and sales people. He concludes that prior to the 2002 regulation, the manufacturers were using ET to induce the dealer services that they were compelled to specify directly in contracts after ET was banned.

⁴⁶ The cross elasticities of demand between retailers are statistically insignificant in Villas-Boas's estimates. Thus, her finding of zero wholesale margin does not provide support for the predictions of the models with contracting externalities, as those models require retail competition.

3.4 Implications of Literature for the Antitrust Treatment of Vertical Restraints

3.4.1 A. Which Theories Provide a Basis for Antitrust Intervention?

Table 1 lists the theoretical literature on vertical integration/restraints reviewed in the preceding section. The scientific approach to the analysis of vertical integration/restraints can be viewed as determining which explanation (or set of explanations) is most consistent with the evidence in a particular case and choosing a course of action using the Bayesian decision approach.

At the outset, note that most of the theories in Table 1 explain how firms use vertical integration or restraints to increase and/or capture profits generated by their products. This is true of theories 1, 2, 3, 4a-c, 5, 7, 8, 9, and 10b. Most of these theories suggest that vertical integration/restraints are associated with potential efficiencies, such as the elimination of double marginalization, cost savings, or enhanced incentives for upstream or downstream services. However, the two theories involving contracting externalities (7 and 10b) suggest that vertical integration/restraints can raise price without any associated efficiency benefits. Do these theories provide a basis for antitrust intervention?

The contracting externality theories expose some key assumptions behind the “one-monopoly-rent” arguments of the Circa 1984 Synthesis, most importantly, the assumptions of observable, take-it or leave-it offers. The effects of vertical integration and restraints in these theories have also been called “foreclosure” by leading scholars,⁴⁷ and there is experimental evidence suggesting that contracting externalities in this class of models have relevance.⁴⁸

⁴⁷ See Rey and Tirole (2007).

⁴⁸ See Martin, Normann, and Snyder (2001).

However, these theories do not provide a good basis for antitrust intervention in my opinion.

The motivation for restraints in these theories is to allow the upstream firm to make the commitments necessary to maximize and capture the profits generated by its product. With the exception of actions deemed predatory or collusive, the antitrust laws have never been used in the U.S. to prevent firms from doing their best to maximize profits. Indeed, the patent and trademark system explicitly recognizes the need to protect this right in order to promote investments leading to new and better products. Firms adopt myriad pricing practices designed to maximize profits, including volume discounts, rebate programs, warranties, periodic sales, etc., many of which are known to have theoretically ambiguous effects on ex post welfare. However, these practices are not condemned by the anti-trust laws because the freedom to engage in these practices encourages investment and innovation. Similarly, the antitrust laws should not be used, in my opinion, to condemn upstream strategies designed to create or extract value, but rather should focus on practices that harm competition.⁴⁹

3.4.2 Empirical Evidence and Prior Beliefs

Under Bayesian decision approach, prior beliefs should be guided by the empirical evidence. Based on the survey in the previous section, the empirical literature on RPM, ET, vertical integration, and non-linear contracting suggests that these practices have been used to mitigate double marginalization and induce demand increasing activities by retailers. With few exceptions, the literature does not support the view that these practices are used for anticompetitive reasons. This literature supports a fairly strong prior belief that these practices are unlikely to be anti-competitive in most cases.

⁴⁹ See Carlton and Heyer (2008) for a similar view.

3.4.3 Case-Specific Evidence and the Reasonableness Criterion

The second step in the Bayesian decision approach to the analysis of vertical practices is to update prior beliefs based on evidence in a case. I note at the outset that all of the anticompetitive theories of vertical restraints require the presence of market power in either the upstream or downstream market. For the purposes of the discussion here, I will assume that market power exists and focus on using the evidence to determine which theory seems most consistent with the evidence conditional on the presence of market power.

In the best case scenario, the evidence would offer a natural experiment that could be used to infer the effects of the practice in question on important variables like price, industry output, and measures of demand-enhancing effort (although the latter may be extremely hard to measure). For example, if the RPM under challenge was adopted in response to an event such as a change in a state law, it may be possible to use states in which the law did not change as a control group for measuring the impact of RPM in the states where it did change. Such natural experiments, however, are rarely possible in antitrust investigations.

Cases typically present evidence about whether firms believe they benefit or are harmed by vertical restraints, but this evidence typically is not very helpful. Manufacturers who impose minimum RPM benefit whether they do so to induce non-price retailer decisions (theories 4a-4c), soften competition (theory 6b), mitigate contracting externalities (theory 7), mitigate double moral hazard (theory 8), mitigate retailer price discrimination (theory 9), or support a manufacturer cartel (theory 11a). Similarly, retailers may be worse off with restraints under theories involving non-price retailer effort, so retailer complaints are not informative.

The reality is that the primary tools the policy authority has for determining which explanations in Table 1 are consistent with the evidence is the *reasonableness* of the model's assumptions in light of the evidence. In attempting to use the reasonableness criterion for

model selection in an investigation of a vertical practice, a practitioner confronts several difficulties.

First, it is often not clear which assumptions are the most reasonable. To understand the scope of this problem, consider the class of models that assume upstream monopoly, downstream oligopoly, no important non-price decisions by retailers and manufacturers, and no uncertainty or asymmetric information. Suppose we also abstract from the potential for retail collusion. The relevant model classes are then 3 (One Monopoly Rent – Modern), 7 (Contract externalities I), and 10b (Bargaining). These models are a subset of the class “agency” models, in which a principal (the upstream monopolist) sells through multiple agents (the retailers). This is small subset of the class of all agency models, however, as the models abstract from moral hazard, uncertainty, and exogenous (non-contractual) asymmetric information.

Even within this very narrow set of agency models, however, the predictions of the theoretical literature vary wildly depending on the assumptions made about the nature of contracting. This becomes clear from considering the predictions of the models in the benchmark case without integration or restraints. If manufacturers offer observable, linear payment schedules on a take-it or leave-it basis (model 3), then the resulting retail prices are typically above the prices a fully integrated firm would charge and fall to the fully integrated prices as the downstream market becomes perfectly competitive. On the other hand, if retailers bargain over linear payment schedules (model 10b), then retail prices may be below the fully integrated prices, possibly well below. Finally, if the manufacturer makes offers that are unobservable to rivals, then theory predicts that virtually anything can happen, depending on the assumptions made about out-of-equilibrium beliefs (model 7). No compelling basis has been offered for choosing appropriate out-of-equilibrium beliefs.

The point is that even in the simplified world of an upstream monopolist distributing its products through downstream oligopolists, the theoretical literature makes wildly different predictions

based on assumptions made about the nature of input contracting. The predicted price absent restraints ranges from downstream oligopoly outcome conditional on *competitive* wholesale prices to an outcome with double marginalization and a price *above* the fully-integrated monopoly price. All the models in Table 1 below model 3 add additional complexities to the mix and thus retain the property that the predictions depend crucially on the assumptions about the nature of input contracting.

One might hope that it would be obvious which contracting assumption is most reasonable. Unfortunately, this is not the case. Consider the question of whether contracts are observable to rivals, an assumption that is crucial in many of these models. Note that this question cannot be answered simply by asking the firms in the industry. The models that rely on this assumption are abstractions that collapse complicated dynamic processes into simple two-stage games. Even if contracts are signed in private, are they effectively inferred quickly enough to reasonably be treated as observable? If treating them as observable leads to equilibria in which firms would have incentives to secretly renegotiate, should we treat them as unobservable? The question is not whether contracts are observable, but rather which observability assumption works best in the particular abstraction (model) that is used. Ultimately, this is an empirical question, but the relevant empirical work has not been carried out.

Two related issues bear on the difficulties of using the reasonableness criterion. First, the theoretical literature has tended to evaluate the incentives for and effects of integration/restraints relative to bench-marks that do not involve any integration or restraints. However, one would expect a firm constrained from using its most preferred restraint to adopt an alternative in an attempt to mimic the prohibited restraint. For example, Zanarone (2009) finds that firms responded to a ban on ET by adopting retail service standards. Similarly, vertical integration is often a substitute for vertical restraints; exclusive territories are sometimes a substitute for RPM; revenue sharing contracts mitigate double marginalization

(Mortimer, 2008) and may be a substitute for maximum RPM or vertical integration. The potential for firms to respond to antitrust challenges by adopting alternative restraints complicates the use of the reasonableness criterion. What benchmark should be used?

Second, the theoretical literature also tends to focus on models that abstract from one set of issues to focus specifically on another set. For example, the literature on non-price retailer decisions typically assumes upstream monopoly, abstracting from the effects of upstream rivalry. An implication of this path in the development of the theory is that there are many gaps in the literature. For example, I am not aware of any published papers that explore the effects of RPM and ET in a model with both upstream and downstream oligopoly in an environment in which firms write observable, buyer-specific, nonlinear contracts (row 12 in Table 1).⁵⁰ To my knowledge, there are also no papers that explore the motivation and effects of vertical restraints when both non-price retailer decisions and upstream competition are important (row 13 in Table 1). We do not know the conditions under which vertical restraints arise in equilibrium in such environments, nor do we know whether they enhance or suppress competition.

One could go on and on about the difficulties of using the reasonableness criterion for model selection in the antitrust treatment of vertical restraints and integration given the current state of the literature. The bottom line is that we simply must accept that the literature has not progressed to the point where the

⁵⁰ Rey and Vergé (2008) have begun to explore this issue theoretically in a model with duopoly at both stages. They show that there exists an equilibrium in observable two-part tariffs with RPM that sustains the monopoly outcome. It is hard to evaluate the welfare effects of RPM in their model, however, because 1) there are multiple equilibria, and the upstream and downstream firms have different preferences over them; and 2) they have not characterized the full set equilibria in the absence of RPM. Without RPM, a pure strategy equilibrium in which both retailers stock all products often fails to exist.

reasonableness criterion advances the ball very far in these investigations.

3.5 Conclusion

The theoretical literature on RPM, ET, and forward integration from Cournot through the Circa 1984 Synthesis implies a largely benign view of the effects of vertical restraints/integration, consistent with what I have called the fundamental theorem of antitrust (“combining substitutes is bad and combining complements is good, unless demonstrated otherwise”). The empirical literature over the last 25 years largely supports this theorem, at least with respect to the statement about complements. The theoretical literature on vertical practices over the past 25 years has generated numerous possibility theorems regarding the possible effects of vertical practices. However, possibility theorems without more do not provide a good basis for policy. Neither the empirical literature conducted to date, nor an evaluation of this literature based on the reasonableness of model assumptions, offers a compelling rejection of the implications of the Circa 1984 Synthesis.

The models that support the Circa 1984 Synthesis incorporate the horizontal and vertical pricing externalities first studied by Cournot, as well as non-price externalities of a similar nature. These models are relatively simple and make straightforward predictions. Developments following the Circa 1984 Synthesis include the recognition of contracting externalities and strategic effects designed to soften competition. These factors complicate the models significantly, and the predictions of these models do not seem to be robust across the set of reasonable assumptions about the nature of input contracts. Given what we know now, a preference for parsimony and robustness would not support putting a lot of weight on the predictions of models of vertical control that incorporate contracting externalities and strategic effects of the type discussed in this paper. This does not mean that these factors are not important.

The point is that we do not know enough to give these factors significant weight.

Given the state of the literature, a scientific approach to policy regarding vertical restraints/integration would challenge these practices under two circumstances: (1) direct evidence of likely harm in a specific case, e.g., a natural experiment that suggests that the practice will be harmful; or (2) a belief that the loss associated with committing type II error (failing to condemn an anticompetitive practice) would be very large relative to the cost of committing type I error (wrongly condemning a pro-competitive practice). There is no empirical basis for such a belief. Thus, my own view, based largely on a Hippocratic philosophy of non-intervention absent good evidence that intervention will have benefits, is that direct evidence of likely harm should be required before condemning a vertical practice. If there were a Hippocratic Oath among antitrust practitioners, this is where a scientific approach would lead.

Table 1: Theoretical Literature on RPM, ET, and Vertical Integration under Fixed Proportions.

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
1. Successive Monopoly Upstream Monopoly Downstream Monopoly	Linear payment schedules Observable offers Take-it or leave-it offers	Retailer: None Mfgr: None	No uncertainty Symmetric information	Cournot (1838) Zeuthen (1930) Spengler (1950)	No Restraints: Double marginalization; retail price above the fully integrated price. Restraints: Vertical integration, nonlinear contracts, or max RPM eliminates double marginalization, lowers price. Welfare Effects of Restraints: Positive
2. “One Monopoly Rent”-Original Upstream Monopoly Downstream Competition	Linear payment schedules Observable offers Take-it or leave-it offers	Retailer: None Mfgr: None	No uncertainty Symmetric information	Director ('40s-'50s) Comment (1952) Bork (1954)	No Restraints: Linear contracts achieve the fully integrated outcome. Restraints: The only motivation for integration or restraints is to reduce production or transaction costs.
3. “One Monopoly Rent” - Modern Upstream Monopoly Downstream Oligopoly	Linear payment schedules Observable offers Take-it or leave-it offers	Retailer: None Mfgr: None	No uncertainty Symmetric information	Dixit (1983) Mathewson & Winter (1984) Perry & Groff (1985)	No Restraints: Double marginalization; retail prices typically above fully integrated prices. Restraints: Nonlinear contracts or max RPM with linear contracts achieve the fully integrated outcome. Welfare Effects of Restraints: Ambiguous; often positive.

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>4.a. Retailer Non-Price Decisions – services/ effort, with free riding</p> <p>Upstream Monopoly</p> <p>Downstream Competition/Oligopoly</p>	<p>Linear*/ Two-part tariff payment schedules</p> <p>Observable offers</p> <p>Take-it or leave-it offers</p> <p>*Telser / Marvel & McCafferty</p>	<p>Retailer: Demand-enhancing services, with free-riding, or spillovers</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric information</p>	<p>Telser (1960)</p> <p>Mathewson & Winter (1983a), (1984)</p> <p>Mavel & McCafferty (1984)</p> <p>Perry & Porter (1990)</p>	<p>No Restraints: Margins too low to induce fully integrated service level.</p> <p>Restraints: Min RPM or ET with franchise fees gives retailers incentives to invest in services, restores fully integrated outcome.</p> <p>Welfare Effects of Restraints: Ambiguous; often positive.</p>
<p>4.b. Retailer non-price decisions – services/ effort, no free-riding</p>	<p>Two-part tariff payment schedules</p> <p>Observable offers</p> <p>Take-it or leave-it offers</p>	<p>Retailer: Demand-enhancing services, no free-riding or spillovers</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric information</p>	<p>Mathewson & Winter (1984)</p> <p>Winter (1993)</p>	<p>No Restraints: Retail competition yields margins too low to induce the fully integrated service level.</p> <p>Restraints: Min RPM or ET gives retailers incentives to invest in services, and restores the fully integrated outcome.</p> <p>Welfare Effects of Restraints: Ambiguous; often positive.</p>
<p>4.c. Retailer non-price decisions – product variety/ entry/ inventory</p> <p>Upstream Monopoly</p> <p>Downstream Oligopoly</p>	<p>Linear/Two-part tariff* payment schedules</p> <p>Observable offers</p> <p>Take-it or leave-it offers</p> <p>*Perry & Porter considered both</p>	<p>Retailer: Entry decision</p> <p>Inventory decision</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric information</p>	<p>Gould & Preston (1965)</p> <p>Dixit (1983)</p> <p>Perry and Groff (1983)</p> <p>Perry and Porter (1990)</p> <p>Deneckere et al. (1996)</p>	<p>No Restraints: Equilibrium may involve double marginalization and too much or too little product variety.</p> <p>Restraints: Two-part tariffs and/or RPM (sometimes max, sometimes min) leads to fully integrated outcome.</p> <p>Welfare Effects of Restraints: Ambiguous; often positive.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>5. Cost or Demand Uncertainty/ Retailer Risk Aversion</p> <p>Upstream Monopoly</p> <p>Downstream Oligopoly</p>	<p>Two-part tariff contracts</p> <p>Observable offers</p> <p>Take-it or leave-it offers</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>Cost and demand uncertainty at time of contracting</p> <p>Retailer risk-aversion</p> <p>Retailers observe cost and demand when pricing</p>	<p>Rey and Tirole (1986)</p>	<p>No Restraints: Retail competition with no restraints transfers risk to the manufacturer and yields efficient responses to cost uncertainty, but does not respond optimally to demand uncertainty.</p> <p>Restraints: When retailer risk aversion is low, ET is used to induce optimal responses to retail cost and demand shocks.</p> <p>Welfare Effects of Restraints: ET reduces welfare because consumer surplus is increasing in the variance of consumption.</p>
<p>6.a. Strategic Motives – Vertical Integration</p> <p>Upstream Oligopoly</p> <p>Downstream Oligopoly</p>	<p>Linear payment schedules</p> <p>Observable offers</p> <p>Take-it or Leave-it Offers</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric information</p>	<p>Salinger (1988)</p> <p>Ordover et al. (1990)</p> <p>Reiffen and Vita (1994)</p> <p>Choi & Yi (2000)</p> <p>Chen (2001)</p>	<p>Integration: In general, vertical integration can have two opposing effects. It can eliminate double marginalization between integrating firms, and it may reduce effective competition for sales to nonintegrated downstream firms.</p> <p>Welfare Effects of Integration: Ambiguous.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>6.b. Strategic Motives – Vertical Restraints</p> <p>Upstream Competition /Oligopoly</p> <p>Down-stream Oligopoly</p>	<p>Linear/ Two-part tariff payment schedules*</p> <p>Observable/ Unobservable offers**</p> <p>Take-it or leave-it Offers</p> <p>*Foundational literature assumes two-part tariffs; Shaffer and Rey & Stiglitz consider both.</p> <p>**Results depend on what is observable.</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric information</p>	<p><i>Foundations:</i></p> <ul style="list-style-type: none"> - Ferhstman & Judd (1987) - Sklivas (1987) - Bonanno & Vickers (1988) <p><i>Applications:</i></p> <ul style="list-style-type: none"> - Shaffer (1991) - Rey & Stiglitz (1995) 	<p>No Restraints: Upstream competition leads to competitive wholesale prices. Retail prices equal those of integrated, differentiated Bertrand retailers.</p> <p>Restraints:</p> <p><i>Slotting Allowances and RPM (Shaffer):</i></p> <ul style="list-style-type: none"> - Slotting allowances with observable wholesale prices lead to wholesale prices above marginal cost, softening competition. - Min RPM may be used to soften competition when i) slotting allowances are infeasible, or ii) RPM is observable, wholesale prices are not. <p><i>Exclusive Territories (Rey & Stiglitz):</i></p> <ul style="list-style-type: none"> - Under linear contracts, ET softens competition but exacerbates double mark-ups. Profitability depends on the size of these effects. When ET is used, it raises prices. - Under observable nonlinear contracts, ET softens competition and leads to higher prices. <p>Welfare Effects of Restraints: Slotting allowances, RPM, or both together raises prices reduces welfare relative to the linear price benchmark. ET raises prices and reduces welfare relative to the linear and non-linear benchmarks.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>7. Contracting Externalities I</p> <p>Upstream Monopoly/Oligopoly</p> <p>Down-stream Oligopoly</p>	<p>Nonlinear payment schedules</p> <p>Unobservable offers</p> <p>Take-it or leave-it offers/bargaining</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric cost and demand information</p> <p>Private contract information</p>	<p>Hart & Tirole (1990)</p> <p>O'Brien & Shaffer (1992)</p> <p>McAfee & Schwartz (1994)</p> <p>Rey & Vergé (2004)</p> <p>Alexander & Reiffen (2005)</p> <p>Rey & Tirole (2007)</p>	<p>No Restraints: Outcome depends on details of the game (solution concept, game form).</p> <p><i>1. Contract Equilibrium (O'Brien & Shaffer), or Take-it or Leave-it Offers with Passive Beliefs (Hart & Tirole, McAfee & Schwartz).</i> Marginal transfer prices equal upstream marginal cost. Retail prices are less than fully-integrated prices.</p> <p><i>2. Take-it or Leave-it Offers with Wary Beliefs (McAfee & Schwartz, Rey & Vergé).</i> Marginal transfer prices exceed upstream marginal cost, but are too low to induce the fully integrated outcome.</p> <p><i>3. Take-it or Leave-it Offers with Symmetry Beliefs (Rey and Tirole).</i> If retailers are symmetric, two-part tariff contracts achieve the fully integrated outcome.</p> <p><i>4. Take-it or Leave-it Offers with Suspicious Beliefs (Unpublished).</i> Retailers may refuse to agree to anything but linear prices out of fear that rivals will receive low offers and be very aggressive. The outcome may be analogous to double marginalization.</p> <p>Integration/Restraints:</p> <p><i>1. Contract Equilibrium/Passive Beliefs Benchmark.</i> A vertical merger between the upstream</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>7. Contracting Externalities I...continued.</p> <p>Upstream Monopoly/Oligopoly</p> <p>Down-stream Oligopoly</p>	<p>Nonlinear payment schedules</p> <p>Unobservable offers</p> <p>Take-it or leave-it offers/bargaining</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Symmetric cost and demand information</p> <p>Private contract information</p>	<p>Hart & Tirole (1990)</p> <p>O'Brien & Shaffer (1992)</p> <p>McAfee & Schwartz (1994)</p> <p>Rey & Vergé (2004)</p> <p>Alexander & Reiffen (2005)</p> <p>Rey & Tirole (2007)</p>	<p>firm and one downstream firm raises the wholesale prices charged unintegrated downstream firms. Final prices rise (Hart & Tirole). Industry-wide min RPM, max RPM, and ET can recover the fully integrated outcome, (O'Brien & Shaffer). Enforceability of min RPM and ET are questionable (Alexander & Reiffen).</p> <p><i>2. Other Beliefs.</i> Vertical integration eliminates the wholesale margin, mitigating double-marginalization. The integrated firm may also raise prices to unintegrated downstream firms. The net effect is ambiguous. Sufficient vertical restraints may raise or lower retail prices, depending on out-of-equilibrium beliefs.</p> <p>Welfare Effects of Integration/Restrains:</p> <p><i>1. Passive beliefs.</i> Integration/restraints lowers ex post welfare by allowing the upstream firm to make commitments required to exercise its market power.</p> <p><i>2. Other beliefs.</i> Effects of integration/ restraints are ambiguous; depends on out-of-equilibrium beliefs.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>8. Double Moral Hazard</p> <p>Upstream Monopoly</p> <p>Down-stream Monopoly</p>	<p>Linear payment schedules</p> <p>Observable offers</p> <p>Take-it or leave-it offers</p>	<p>Retailer: Demand-enhancing service</p> <p>Mfgr: Demand-enhancing service</p>	<p>No uncertainty</p> <p>Symmetric information</p>	<p>Romano (1994)</p>	<p>No Restraints: Equilibrium wholesale price balances externalities associated with double marginalization, upstream effort, and downstream effort.</p> <p>Restraints: Max or min RPM, depending on the size of the double marginalization and upstream and downstream service externalities, increases the manufacturer's profit. RPM induces greater service provision upstream and/or downstream while minimizing the effect of other output-reducing externalities.</p> <p>Welfare Effects of Restraints: Generally ambiguous. Often positive.</p>
<p>9. Mitigate Distortions from Price Discrimination by Competing Retailers</p>	<p>Two-part tariff payment schedules</p> <p>Observable offers</p> <p>Take-it or leave-it offers</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No uncertainty</p> <p>Retailer has private information about sales by customer class.</p>	<p>Chen (2002)</p>	<p>No Restraints: Two-part tariffs are insufficient to control the full set of discriminatory prices charged by downstream firms.</p> <p>Restraints: Max or min RPM move closer to integrated outcome.</p> <p>Welfare Effects of Restraints: Ambiguous, for reasons related to the ambiguous effects of price discrimination.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>10.a. Contracting Externalities II – RPM Under Linear Price Bargaining</p> <p>Upstream Oligopoly</p> <p>Down-stream Oligopoly</p>	<p>Linear payment schedules</p> <p>Observable offers</p> <p>Negotiated linear wholesale prices</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No Uncertainty</p> <p>Symmetric information</p>	<p>Dobson and Waterson (2007)</p>	<p>No Restraints: Under differentiated Bertrand competition upstream and downstream, the negotiated transfer price is decreasing in the degree of down-stream competition (closeness of substitution). As down-stream firms become perfect substitutes, the wholesale price falls to marginal cost, leading to the competitive outcome, even when upstream firms have market power.</p> <p>Restraints: When interbrand competition is weak, or when retailers have sufficient bargaining power, RPM may raise prices, especially if intrabrand competition is intense. If retailers have little bargaining power and intrabrand rivalry is weak, then RPM lowers prices. It is unclear whether RPM is min, max, or fixed.</p> <p>Welfare Effects of Restraints: Difficult to evaluate because the authors do not model manufacturers' decisions whether to adopt restraints. It appears that RPM would be profitable in at least some cases in which it raises prices. It is unclear how much is due to the commitment effect and how much is from a strategic effect.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>10.b. Contracting Externalities II – Vertical Integration Under Linear Price Bargaining</p> <p>Upstream Oligopoly</p> <p>Down-stream Oligopoly</p>	<p>Linear payment schedules</p> <p>Observable offers</p> <p>Negotiated linear wholesale prices</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>No Uncertainty</p> <p>Symmetric information</p>	<p>Thesis: O'Brien (1989)</p> <p>Working Paper: O'Brien (2002)</p>	<p>No Integration</p> <p>1. Under Cournot oligopoly, if the number of downstream firms is high enough, the equilibrium price is below the fully integrated price. (O'Brien, 1989).</p> <p>2. As conduct in the downstream market becomes more competitive, the equilibrium wholesale price falls to marginal cost. (O'Brien, 2002).</p> <p>Vertical Integration: If the number of downstream firms is high enough (greater than 2 for linear demand and symmetric bargaining weights), or if downstream conduct is sufficiently competitive, vertical integration raises the equilibrium price.</p> <p>Welfare: Vertical integration reduces ex post welfare by allowing the upstream firm to make commitments necessary to exercise its market power.</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
<p>11.a. Collusion – Mfgr Cartel</p> <p>Upstream Oligopoly</p> <p>Down-stream: Each mfgr sells through sequence of different exclusive retailers</p>	<p>Two-part tariff payment schedules</p> <p>Unobservable offers</p> <p>Take-it or leave-it offers</p>	<p>Retailer: None</p> <p>Mfgr: None</p>	<p>Final demand is uncertain at time of contracting</p> <p>Retailers observe demand shocks before pricing</p>	<p>Jullien and Rey (2007)</p>	<p>No Restraints: Repeated interaction in two-part tariffs generally leads to some degree of tacit coordination.</p> <p>Restraints: RPM makes it easier to detect defections from a collusive agreement, but the short run gains from defection are higher and the long run cost from defection is lower under RPM than without it. RPM may or may not enhance the scope for collusion.</p> <p>Welfare Effect of Restraints: Generally ambiguous, although RPM reduces welfare if it is adopted when the scope for collusion is high in the absence of RPM.</p>
<p>11.b. Collusion – Dealer Cartel</p> <p>Upstream Oligopoly</p> <p>Down-stream Oligopoly</p>	<p>No formal literature</p>	<p>No formal literature</p>	<p>No formal literature</p>	<p>No formal literature</p>	<p>No formal literature</p>

Label/ Market Structure	Benchmark Contracts	Non-price Decisions	Information Structure	Representative Literature	Key Results
12. Mfgr Oligopoly/ Retail Oligopoly	Non-linear payment schedules Bargaining or take-it or leave-it offers Observable offers	Retailer: None Mfgr: None	No uncertainty Symmetric information	Working paper: *Rey and Vergé (2008) *They explore the case of take-it or leave-it offers by manu- facturers	No Restraints: Pure strategy equilibria often fail to exist when retailers are imperfectly competitive and decide independently whether to carry their products. Restraints: Multiple equilibria exist, one of which sustains the fully integrated outcome. Welfare Effects of Restraints: ??
13. Non-price Retailer Effort and Manu- facturer Oligopoly Upstream Oligopoly Downstream Oligopoly	Linear/ Non-linear payment schedules Observable offers Take-it or leave-it offers	Retailer: Demand- enhanc- ing services Mfgr: None	No uncertainty Symmetric information	No formal literature	No Restraints: ?? Restraints: ?? Welfare Effects of Restraints: ??

References

- Adelman, M. (1949), "Integration and Antitrust Policy," *Harvard Law Review* 63, 27-77.
- Alexander, C. and Reiffen, D. (2005), "Vertical Contracts as Strategic Commitments: How are They Enforced?" *Journal of Economics & Management Strategy* 4, 623-649.
- Barron, J. and Umbeck, J. (1984), "The Effects of Different Contractual Arrangements: The Case of Retail Gasoline Markets," *Journal of Law and Economics* 27, 313-328.
- Barron, J. and Umbeck, J. (1985), "Predatory Pricing: The Case of the Retail Gasoline Market," *Contemporary Policy Issues* 3, 131-39.
- Bertrand, J. (1883), "Book Review of *Theorie Mathematique de la Richesse Sociale* and of *Recherches sur Les Principes Mathematiques de la Theorie des Richesses*," *Journal de Savants* 67, 499-508.
- Bonanno, G. and Vickers, J. (1988), "Vertical Separation," *Journal of Industrial Economics* 36, 257-65.
- Bork, R. (1953), "Vertical Integration and the Sherman Act: The Legal History of an Economics Misconception," *University of Chicago Law Review* 22, 157-201.
- Bowman, Jr., W. (1955), "Prerequisites and Effects of Resale Price Maintenance," *University of Chicago Law Review* 22, 825-73.
- Bulow, J., Geanakopolos, J. and Klemperer, P. (1985), "Multimarket Oligopoly: Strategic Substitutes and Complements," *Journal of Political Economy* 93 488-511.

- Carleton, D. and Heyer, K. (2008) "Appropriate Antitrust Policy toward Single-Firm Conduct: Extraction vs. Extension," forthcoming in *Competition Policy International*, vol. 4.
- Chen, Y. (1999), "Oligopoly Price Discrimination and Resale Price Maintenance," *Rand Journal of Economics* 30, 441-55.
- Chen, Y. (2001), "On Vertical Mergers and Their Competitive Effects," *Rand Journal of Economics* 32, 667-85.
- Choi, J. and Yi, S. (2000), "Vertical Foreclosure with the Choice of Input Specifications," *Rand Journal of Economics* 31, 717-43.
- Comment (1952), "Vertical Forestalling Under the Antitrust Laws," *University of Chicago Law Review* 19, 583-619.
- Comanor, W. and Scherer, F. (2007), "Brief for William S. Comanor and Frederick M. Scherer as *Amici Curiae* Supporting Neither Party," *Leegin Creative Leather Products Inc. v. PSKS, Inc.*
- Cooper, J., Froeb, L., O'Brien, D. and Vita, M. (2005), "Vertical Restraints as a Problem of Inference," *International Journal of Industrial Organization* 23, 639-64.
- Cournot, A. (1838), "*Mathematical Principles of the Theory of Wealth*," Reprinted by Augustus M. Kelley, New York, 1971.
- Cremer, J. and Riordan, M. (1987), "On Governing Multilateral Transactions with Bilateral Contracts," *Rand Journal of Economics* 18, 436-51.
- Davidson, C. and Deneckere, R. (1985) "Incentives to Form Coalitions with Bertrand Competition," *Rand Journal of Economics* 16, 473-86.

- Deneckere, R., Marvel, H. and Peck, J. (1996) "Demand Uncertainty, Inventories, and Resale Price Maintenance," *Quarterly Journal of Economics*, 111 885-913.
- Dixit, A. (1983), Vertical Integration in a Monopolistically Competitive Industry," *International Journal of Industrial Organization* 1, 63-78.
- Dobson, P. and Waterson, M. (2007), "The Competition Effects of Industry-Wide Vertical Price Fixing in Bilateral Oligopoly," *International Journal of Industrial Organization* 25, 935-62.
- Ferhstmann, C. and Judd, K. (1987), "Equilibrium Incentives in Oligopoly," *American Economic Review* 77, 927-40.
- Ford, G. and Jackson, J. (1997), "Horizontal Concentration and Vertical Integration in the Cable Television Industry," *Review of Industrial Organization* 12, 501-18.
- Friedman, J. (1971), "A Noncooperative Equilibrium for Supergames," *Review of Economic Studies* 38, 1-12.
- Fudenberg, D. and Tirole, J. (1984) "The Fat-Cat Effect, the Puppy-Dog Ploy and the Lean and Hungry Look," *American Economic Review* 74, 361-66.
- Gould J. and Preston, L. (1965), "Resale Price Maintenance and Retail Outlets," *Economica* 32, 302-312.
- Green, E. and Porter, R., "Noncooperative Collusion Under Imperfect Price Information," *Econometrica* 52, 87-100.
- Hart, O. and Tirole, J. (1990), "Vertical Integration and Market Foreclosure," *Brookings Papers on Economic Activity* (Microeconomics Issue), 205-86.

- Henderson, A. (1940), "A Further Note on the Problem of Bilateral Monopoly," *Journal of Political Economy* 48, 238-43.
- Heyer, K. (2005), "A World of Uncertainty: Economics and the Globalization of Antitrust," *Antitrust Law Journal* 72, 375.
- Holmstrom, B. (1982), "Moral Hazard in Teams," *Bell Journal of Economics* 13, 324-40.
- Hotelling, H. (1929), "Stability in Competition," *Economic Journal* 39, 41-57.
- Ippolito, P. (1991), "Resale Price Maintenance: Empirical Evidence from Litigation," *Journal of Law & Economics* 34, 263-294.
- Jullien, B. and Rey, P. (2007), "Resale Price Maintenance and Collusion," *Rand Journal of Economics* 38, 983-1001.
- Kreps, D. and Scheinkman, J. (1983), "Quantity Pre-Commitment and Bertrand Competition Yield Cournot Outcomes," *Bell Journal of Economics* 14, 326-37.
- Lafontaine, F. and Slade, M. (2005), "Empirical Assessment of Exclusive Contracts," In *Handbook of Antitrust Economics*, MIT Press, Cambridge.
- Machlup, F. and Taber, M. (1960), "Bilateral Monopoly, Successive Monopoly, and Vertical Integration," *Economica* 27, 101-19.
- Martin, S, Normann, H, and Snyder C. (2001), "Vertical Foreclosure in Experimental Markets," *Rand Journal of Economics* 32, 466-96.
- Marvel, H. and McCafferty, S. (1984), "Resale Price Maintenance and Quality Certification," *Rand Journal of Economics* 15, 346-59.

- Marvel, H. and McCafferty, S. (1985), "The Welfare Effects of Resale Price Maintenance," *Journal of Law and Economics* 28, 364-79.
- Marvel, H. and McCafferty, S. (1986), "The Political Economy of Resale Price Maintenance," *Journal of Political Economy*, 94, 1074-95.
- Mathewson, G. and Winter, R. (1983a), "The Incentives for Resale Price Maintenance under Imperfect Information," *Economic Inquiry* 21, 337-48.
- Mathewson, G. and Winter, R. (1983b), "Vertical Integration by Contractual Restraints in Spatial Markets," *Journal of Business* 50, 497-517.
- Mathewson, G. and Winter, R. (1984), "An Economic Theory of Vertical Restraints," *Rand Journal of Economics*, 15, 27-38.
- McAfee, R. and Schwartz, M. (1994), "Opportunism in Multilateral Vertical Contracting: Nondiscrimination, Exclusivity, and Uniformity," *American Economic Review* 84, 210-30.
- McGee, J. and Bassett, L. (1976), "Vertical Integration Revisited," *Journal of Law and Economics*, 19, 17-38.
- Mortimer, J. (2008), "Vertical Contracts in the Video Rental Industry," *Review of Economic Studies* 75, 165-99.
- O'Brien, D. (1989), "*The Uniform Settlements Policy in International Telecommunications: A Noncooperative Bargaining Model of Intermediate Product 3rd Degree Price Discrimination*," Doctoral Dissertation, Northwestern University.

- O'Brien, D. (2002), "The Welfare Effects of Third Degree Price Discrimination in Intermediate Good Markets: *The Case of Bargaining*, FTC Working Paper #245.
- O'Brien, D. and Shaffer, G. (1992), "Vertical Control with Bilateral Contracts," *Rand Journal of Economics* 23, 299-308.
- Ordover, J., Saloner, G. and Salop, S. (1990), "Equilibrium Vertical Foreclosure," *American Economic Review* 80, 127-42.
- Pautler, P. (2003), "Recent Empirical Evidence on Mergers and Acquisitions," *Antitrust Bulletin* 38, 741-97.
- Perry, M. and Groff, R. (1986), "Resale Price Maintenance and Forward Integration into a Monopolistically Competitive Industry," *Quarterly Journal of Economics* 100, 1293-1311.
- Popper, K. (1959), *The Logic of Scientific Discovery*, 15th ed., Routledge, 2002.
- Reiffen, D. (1992), "Equilibrium Vertical Foreclosure: Comment," *The American Economic Review* 82, 694-697.
- Reiffen, D. and Vita, M. (1995), "Comment: Is There New Thinking on Vertical Mergers?" *Antitrust Law Journal* 63, 917-41.
- Rey, P. and Stiglitz, J. (1995), "The Role of Exclusive Territories in Producers Competition," *Rand Journal of Economics* 26, 431-451.
- Rey, P. and Tirole, J. (1986), "The Logic of Vertical Restraints," *American Economic Review* 76, 921-39.
- Rey, P. and Tirole, J. (2007), "A Primer on Foreclosure," In *Handbook of Industrial Organization*, vol. 3, Elsevier, Amsterdam, pp. 2145-2220.

- Rey, P. and Vergé, T. (2004), "Bilateral Control with Vertical Contracts," *Rand Journal of Economics* 35, 728-46.
- Rey, P. and Vergé, T. (2008), "Resale Price Maintenance and Interlocking Relationships, Toulouse School of Economics, mimeo.
- Romano, R. (1994), "Double Moral Hazard and Resale Price Maintenance," *Rand Journal of Economics* 25, 455-66.
- Salinger, M. (1988), "Vertical Integration and Market Foreclosure," *Quarterly Journal of Economics* 103, 345-56.
- Scherer, F. and Ross, D. (1990), *Industrial Market Structure and Economic Performance*, 3rd ed., Houghton Mifflin, Boston.
- Shaffer, G. (1991), "Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices," *Rand Journal of Economics* 22, 120-135.
- Shapiro, C. (2001), "Navigating the Patent Thicket," In *Innovation Policy and the Economy*, Vol. I, MIT Press, 2001.
- Shepard, A. (1993), "Contractual Form, Retail Price, and Asset Characteristics in Gasoline Retailing," *Rand Journal of Economics* 24 58-77.
- Sklivas, S. (1987), "The Strategic Choice of Managerial Incentives," *Rand Journal of Economics* 18, 452-58.
- Smith, A. (1776), *The Wealth of Nations*, Penguin, New York.
- Spence, M. (1975), "Monopoly, Quality, and Regulation, *The Bell Journal of Economics*, 6, 417-29.

- Spengler, J. (1950), "Vertical Integration and Antitrust Policy," *Journal of Political Economy* 53, 347-52.
- Stigler, G. (1964), "A Theory of Oligopoly," *Journal of Political Economy* 74, 44-61.
- Telser, L (1960), "Why Should Manufacturers Want Fair Trade?" *Journal of Law and Economics* 3, 86-105.
- U.S. Merger Guidelines (1997).
- U.S. Non-Horizontal Merger Guidelines (1984).
- Villas-Boas, S. (2007), "Vertical Relationships Between Manufacturers and Retailers: Inference with Limited Data," *Review of Economics Studies* 74, 625-52.
- Vita, M. (2000), "Regulatory Restrictions on Vertical Integration and Control: The Competitive Impact of Gasoline Divorcement Policies," *Journal of Regulatory Economics*, 18 217-33.
- Vives, X. (1999), *Oligopoly Pricing: Old Ideas and New Tools*, The MIT Press, Cambridge.
- Whinston, M. (2006), *Lectures on Antitrust Economics*, MIT Press, Cambridge.
- Winter, R. (1993), "Vertical Control and Price Versus Nonprice Competition," *The Quarterly Journal of Economics* 108, 61-76.
- Yamey, B. (1954), *The Economics of Resale Price Maintenance*, Sir Isaac Pitman, London.
- Zeuthen, F. (1930), *Problems of Monopoly and Economic Warfare*, London.

4 Buyer-Driven Vertical Restraints

*Paul W. Dobson*¹

4.1 Introduction

The traditional emphasis in economics regarding vertical restraints has been on seller-led practices, where an upstream party places (by imposition or agreement) conditions for trading with a downstream party. This is typically conceived in terms of a principal-agent relationship – for example, an upstream producer requiring contractual undertakings by a downstream distributor as a condition of trade, but that serve to restrict the latter’s behaviour, potentially affecting the markets in which the trading parties operate. This is, for example, the approach commonly adopted even in advanced text-book treatments of vertical restraints and their analyses of the impact of restraints on intra-brand and/or inter-brand competition.² The kind of restraints and practices covered in this manner include non-linear pricing (like two-part tariffs and quantity discounts), resale price maintenance, quantity forcing, exclusive dealing obligations, exclusive distribution (including exclusive territories), selective distribution, refusal to supply, and tying (including bundling and full-line forcing).

This supply-led emphasis rests on the perception that it is manufacturers and other upstream parties that control trading relation-

¹ Contact Address: Business School, Loughborough University, Loughborough LE11 3TU, United Kingdom. Email: P.W.Dobson@Lboro.ac.uk

² See, JEAN TIROLE, *THEORY OF INDUSTRIAL ORGANIZATION* (MIT Press, 1988); STEPHEN MARTIN, *ADVANCED INDUSTRIAL ECONOMICS* (Blackwell Publishing, 2nd ed. 2002); MASSIMO MOTTA, *COMPETITION POLICY: THEORY AND PRACTICE* (Cambridge U.P., 2004).

ships with distributors and other downstream agents to the extent that the former can largely impose their will on the latter regarding the terms and conditions of supply. This view also seems to lie at the heart of current policy treatment towards vertical restraints, as clearly evident from the examples and discussion in the European Commission's *Guidelines on Vertical Restraints*.³

Yet, in reality, vertical restraints may be applied in either direction between trading parties. In particular, it is quite conceivable for powerful business customers to use their *buyer power* (in a broader "bargaining power" sense than merely "monopsony power") to negotiate or impose restrictions and particular conditions of trade (i.e. beyond price) on suppliers of goods and services. Examples of *buyer-driven* restraints include conditional purchase behaviour (e.g. exclusive supply obligations or reciprocal buying), additional payment requirements (e.g. listing charges, slotting allowances, retro-active discounts, or joint marketing contributions), most-favoured customer (MFC) clauses, refusal to buy (including delisting products), and deliberate risk shifting (such as enforced sale-or-return or delayed payments).

Buyer-driven restraints have featured increasingly in cases and industry inquiries covering sectors like health care, professional sports, natural resource extraction, farming, ranching, and forestry.⁴ However, it is in regard to retailing where much of the recent

³ European Comm'n, Commission Notice - Guidelines on Vertical Restraints, C291 E.C. Official Journal 1 (2000), available at http://europa.eu.int/eurlex/pr/eu/oj/dat/2000/c_291/c_29120001013en00010044.pdf.

⁴ See Albert Foer, *Introduction to Symposium on Buyer Power and Antitrust*, 72 ANTITRUST L.J. 505 (2005); Warren S. Grimes, *Buyer Power and Retail Gatekeeper Power: Protecting Competition and the Atomistic Seller*, 72 ANTITRUST L.J. 563 (2005); Roger G. Noll, "Buyer Power" and Economic Policy, 72 ANTITRUST L.J. 589 (2005). The now classic reference on the subject of monopsony power is ROGER D. BLAIR & JEFFREY L. HARRISON, *MONOPSONY: ANTITRUST LAW AND ECONOMICS* (Princeton U.P., 1993).

attention on buyer-driven practices has been focused as these appear both widespread and numerous in type and variety. In line with this development, it is the retail sector and the various restraints associated with retail buyer power that constitute the central focus of the present article to provide illustrations of the implications of such restraints and how analysis of them may differ from consideration of supplier-led restraints.

In particular, the rise in retailer power, associated with increasing concentration and significant barriers to entry (e.g. arising from required sunk investments in developing retail brands, store portfolios, IT/logistical/supply-chain infrastructure, and specialized personnel, as well as institutional restrictions such as planning regulations), can allow major retailers to exploit the increasingly important gatekeeper role they occupy for producers seeking to sell goods to final consumers. This opens up the prospect that suppliers may be “economically dependent” on major retailers to the extent that they would be willing to concede to various vertical restraints that restrict or influence their behaviour. Making such concessions to powerful buyers may directly or indirectly affect the nature of competition in supplier markets. It may also affect competition in retail selling markets when retailers possess seller power in addition to buyer power. Moreover, while the effects may directly fall on the firms competing at either of these vertical levels, the knock-on consequences for consumers from restraints that serve to prevent, restrict and/or distort competition may take the form of an adverse impact on product/service prices, choice, quality, and/or innovation. In other words, buyer-driven vertical restraints can have the capacity to generate or extend market power to the detriment of consumers. Nevertheless, as with other, seller-led vertical restraints, there can be efficiency benefits associated with such practices which mean that a *rule of reason* approach is called for, but one guided by the economic insights and analysis that have emerged on the economic welfare effects of these practices.

This article considers the nature and economic effects of buyer-driven restraints and the appropriate public policy treatment of

them. In so doing, it examines the factors behind the emergence of substantial buyer power in certain sectors, most noticeably in retailing, and how this power has been applied in respect of the number and range of restraints that major “power buyers” are now able to place on their suppliers. In particular, the article draws on insights from detailed industry investigations in the UK concerned with how grocery retailers apply their buyer power over suppliers in regard to non-price terms, as well as illustrations from cases and inquiries in other countries, notably the US. The article provides some general illustrations as well as more in-depth discussion on the economic welfare aspects relating to particularly contentious buyer-driven restraints, including access payments paid to retailers in the form of slotting allowances and other off-invoice fees, refusal to trade in the context of category management, and exclusive supply obligations.

4.2 Types of Buyer-Driven Vertical Restraints

Buyer power is essentially the ability of particular buyers to obtain from suppliers more favourable terms than those available to other buyers, or which would otherwise be expected under normal competitive conditions.⁵ For instance, buyer power may arise as a consequence of size differences among buyers (essentially advantages based on scale) or if there are a limited number of buyers of a certain scale (i.e., oligopsony). Yet, buyer power represents more than just the ability to extract discounts and obtain low prices from suppliers. Buyer power also may manifest itself in the contractual obligations that buyers may be able to place on their suppliers to obtain more favourable non-price terms. Specifically, powerful business customers may use their buyer power to negotiate or

⁵ For example, see ROGER CLARKE, STEPHEN DAVIES, PAUL W. DOBSON & MICHAEL WATERSON, *BUYER POWER AND COMPETITION IN EUROPEAN FOOD RETAILING* (Edward Elgar, 2002).

impose restrictions and particular conditions of trade (i.e., beyond price) on suppliers of goods and services, amounting to buyer-driven vertical restraints.

These additional terms and conditions of trade beyond the unit price of the supplied good or service may be aimed at providing the buyer with a direct financial benefit, such as requirements on suppliers to pay lump-sum payments to initiate or continue trading with the buyer. Alternatively, they could be used as a means of securing more indirect financial benefits. For example, buyer forced application of most-favoured-customer clauses, which obligate the supplier not to sell to another retailer at a lower price, guarantee that the buyer will not be placed at a purchase cost disadvantage relative to another buyer. Similarly, exclusive supply arrangements deny other buyers access to the supplier's product, which may allow the buyer to gain a product differentiation advantage over its rivals in downstream markets. Furthermore, the terms and conditions of trade applied by a powerful buyer may also be about shifting the burden of any financial risk squarely on to suppliers. For instance, the buyer may require the supplier accept the return of unused or unsold supplies or impose long delays in payment (to protect its own cash flows but at the supplier's expense). In a similar vein, if there is the prospect of a supply disruption or delay, then a powerful buyer may insist that it receives supplies ahead of other buyers, thereby shifting the risk of non-availability on to its rivals.

As with demands to grant price discounts, suppliers may be under considerable pressure to agree to such non-price requirements when they are "economically dependent" on major buyers. In this situation, failure to concede to the buyer's demands may result in a significant loss of trade for the supplier that cannot easily be made up through other contracts and which would then undermine the economic viability of the supplier.⁶ Moreover, the share of purchases

⁶ Take the case of the economic dependence of consumer goods suppliers on their major retail customers. With retail consolidation there are fewer (alternative) opportunities available for suppliers to gain access to shelf-

taken by the buyer may not necessarily have to be very high for the buyer to exercise substantial bargaining leverage – since even a small loss of sales for the supplier can affect its viability, especially when economies of scale are vital to the profitable functioning of the business.⁷

space and obtain the necessary access through to final consumers. This allows the major retailers greater opportunity to exploit their gatekeeper position – controlling the limited available shelf-space. Suppliers operating under high fixed costs simply cannot afford to lose major contracts, as they have little or no prospect of picking up the lost custom through additional orders placed elsewhere (especially when consumers are more store loyal than brand loyal). Losing such a contract would make it extremely difficult for suppliers to cover costs and earn a profit. Moreover, it may be thought that economic dependency works both ways, but this is not necessarily the case. A major retailer may have other suppliers that it can readily turn to if it chooses to delist a supplier, each of which may be only too willing to increase supply and replace a rival. Also, the retailer may be in a position where it can reallocate shelf space in favour of other product lines. Indeed, it will greatly suit the retailer to keep as many alternatives in play as possible to strengthen its bargaining position and ensure that it does not become over-reliant on any one individual supplier. Producers rarely have the same opportunities. If they boycott a retailer they are not likely to be able to pick up additional business from elsewhere (given that contracts for other retailers are already settled). See Paul W. Dobson, *Exploiting Buyer Power: Lessons from the British Grocery Trade*, 72 ANTITRUST L.J. 529 (2005).

⁷ For instance, the UK Competition Commission in its 2000 Supermarkets inquiry determined that 8 percent of the relevant market could afford sufficient buyer power to distort competition. COMPETITION COMM'N, SUPERMARKETS: A REPORT ON THE SUPPLY OF GROCERIES FROM MULTIPLE STORES IN THE UNITED KINGDOM (2000), available at http://www.competition-commission.org.uk/rep_pub/reports/2000/446super.htm#full, ¶ 1.10. In examining the merger of retail grocery chains, the European Commission has taken the view that a supplier whose business with the merging entities accounted for more than 22 percent of revenues was to be considered “economically dependent” on them, as survey evidence indicated that this

However, while a position of control by a buyer over its suppliers may greatly assist in the imposition of vertical restraints, this is not a prerequisite for buyer-led restraints to arise. Firstly, they may arise through mutual consent between broadly matched trading parties, e.g., as part of the bargaining process where in agreeing to a restraint a supplier gains something in return, such as financial recompense (for any foregone income) or perhaps a reciprocal restraint placed on the buyer.⁸ Secondly, these restraints may be in the context of standard “custom and practice” arrangements that might have emerged in the industry over time, e.g. being used by most or all buyers, perhaps to ensure an even playing field and ensure no discrimination between buyers.⁹ Thirdly, the restraints may arise in the context of a buyer facilitating a suppliers’ cartel, for example supporting a conspiracy of producers to prevent a price collapse through, say, agreements on resale price maintenance or on exclusive supply.¹⁰ Fourthly, such restraints may be associated with a

was the most suppliers could afford to lose without a serious danger of them being driven bankrupt. See European Commission, Case No. IV/M.1221, Rewe/Meinl, Commission decision of February 4, 1999, O.J. (L274), available at: http://ec.europa.eu/comm/competition/mergers/cases/decisions/m1221_19990203_600_en.pdf, ¶ 110.

⁸ For example, in the UK, newspaper wholesalers are granted exclusive territories by national newspaper publishers in return for providing a “universal service” to supply all available retail outlets (subject to some minimum order size) in the territory. See MONOPOLIES AND MERGERS COMM’N, SUPPLY OF NATIONAL NEWSPAPERS (Cm 2442, HMSO, Dec. 1993).

⁹ For example, this might include payment terms commonly employed or rules regarding sharing of promotional expenditure between buyers and sellers.

¹⁰ The most notable case in this context relates to Toys“R”Us, where the Federal Trade Commission found that Toys“R”Us, the largest toy retailer and only national full-line toy chain, orchestrated a boycott by toy makers in the US to cut off suppliers to general discounters (notably warehouse

group of buyers acting in unison, for example seeking to thwart a more efficient retail operation from capturing their customers.¹¹ For the most part, though, the kind of buyer-led vertical restraints that might be expected to occur most commonly are those in which the buyer holds some bargaining advantage over suppliers that ensures their compliance or consent.

These practices can be wide-ranging and quite diverse in nature. One way of viewing them is to consider how they affect the behaviour of trading parties and impact on competitors. With this perspective in mind, Table 1 provides a simple classification of different types of buyer-driven restraints, providing examples for each of the six suggested categories, serving as a basis for discussion of their effects taken up in the next two sections of the article.¹²

clubs), thus keeping prices high and reducing choice for consumers. See *Toys“R”Us, Inc.*, No. 9278, 1998 FTC LEXIS 119 (1998), *aff’d*, *Toys“R”Us, Inc. v. Federal Trade Comm’n*, 221 F.3d 928 (7th Cir. 2000).

¹¹ See, e.g., Debra A. Valentine, *Retailer Buyer Power: Abusive Behavior and Mergers/Acquisitions*, in *INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW 2000* 513 (Barry Hawk ed., Juris Publishing, 2001).

¹² For more details on the examples given, see Paul W. Dobson, *Buyer-Led Vertical Restraints*, in *ISSUES IN COMPETITION LAW AND POLICY* (Wayne Dale Collins ed., American Bar Association, 2008). More generally, it should be pointed out that this is just one classification and there are other ways of linking various buyer-led practices, particularly in the area of retailing where a wide variety of such practices may exist. See, e.g., LONDON ECONOMICS, *COMPETITION IN RETAILING*, 13 OFT Research Paper (1997), *available at* <http://www.offt.gov.uk/NR/rdonlyres/1BEF9804-3DC4-448B-84E5-BB58EF1DC716/0/oft195.pdf>; PAUL W. DOBSON, MICHAEL WATERSON & ALEX CHU, *THE WELFARE CONSEQUENCES OF THE EXERCISE OF BUYER POWER*, 16 OFT Research Paper (1998), *available at* <http://www.offt.gov.uk/NR/rdonlyres/9A4F0B82-1514-4344-9C1F-39621912E9DE/0/oft239.pdf>; Organization for Economic Cooperation and Development (“OECD”), *Background Paper by the Secretariat, Buying Power of Multiple Retailers*, Director for Financial, Fiscal and Enterprise Affairs, Committee on

Table 1 – Buyer-Driven Vertical Restraints

Category	Nature	Examples
1. Conditional Purchase Requirements	Supplier required to provide significant concessions in respect of whom else it may trade or what it (uniquely) provides the buyer as a condition of purchase	<ul style="list-style-type: none"> • Insistence on exclusive supply • Minimum supply obligations • Exclusive distribution • Reciprocal buying • Tying purchases
2. Additional Payment Requirements	Supplier required to provide lump-sum payments or special discounts for gaining/retaining access to a key distribution system or to ensure that the buyer is rewarded for its efforts and compensated for any failings on the part of the supplier	<ul style="list-style-type: none"> • Listing fees • Slotting allowances • Retroactive (overriding) discounts • Joint marketing contributions • Special payments (e.g. buyer merger “wedding gift”)
3. Non-Discrimination Clauses	Requirements placed on a supplier either to ensure that it does not offer (significantly) better terms or products to other purchasers or to assist in helping the purchaser compete on effective terms against other purchasers (e.g., in its downstream markets)	<ul style="list-style-type: none"> • Most favoured customer clause • Requirement to provide best or matching product/service quality • Margin support guarantee • Open book accounting requirement

Competition Law and Policy, DAFFE/CLP(99)21 (1998); Dobson Consulting, *Buyer Power and Its Impact on Competition in the Food Retail Distribution Sector of the European Union* (European Comm’n DGIV, 1999), available at <http://europa.eu.int/comm/competition/publications/studies/bpifrs/>; COMPETITION COMM’N, SUPERMARKETS: A REPORT ON THE SUPPLY OF GROCERIES FROM MULTIPLE STORES IN THE UNITED KINGDOM (Cm 4842, TSO, Oct. 2000), available at http://www.competition-commission.org.uk/rep_pub/reports/2000/446super.htm#full.

4. Refusal to Buy	Purchaser boycotts a supplier or limits its purchases in such a way as to weaken its competitive position or put it out of business (so distorting supplier competition and perhaps raising other purchasers' costs)	<ul style="list-style-type: none"> • Refusal to initiate trading • Terminating long-standing trading relationship at short notice • Delisting certain products
5. Deliberate Risk Shifting	Purchaser pushes on to its supplier the financial risk that it faces from uncertainty over its own performance and realized demand in its downstream markets	<ul style="list-style-type: none"> • Delayed payments • Enforced sale-or-return • Payments to cover product wastage on unused/unsold items • No written contracts
6. Service or Input Requirements	As part of the terms and conditions of supply, the purchaser requires a supplier to provide particular services or to use particular inputs (beyond those normally offered) to suit its own specific needs	<ul style="list-style-type: none"> • Tailored delivery terms • Customized product presentation • Obligations to use third-party contractors • Category management services

4.3 Welfare Effects

The kinds of buyer-driven restraints illustrated in Table 1 may be employed simply as a means to allow the buyer to extract additional surplus (through non-price terms over and above straightforward price discounts) from suppliers and have an essentially neutral effect through a simple transfer of wealth (essentially a different division of the same profit pie). However, as the arrangements by their nature act to restrict or influence supplier behaviour then there is the possibility that their economic effect may extend beyond a simple wealth transfer and they could directly or indirectly affect the nature of competition in supplier markets. These terms may also affect

competition in the buyers' downstream markets, notably when buyer power can be used as a means to reinforce seller power (and perhaps vice versa).¹³ Moreover, while the effects may directly fall on the firms competing at either of these vertical levels, the knock-on consequences for consumers from restraints that serve to prevent, restrict and/or distort competition may take the form of an adverse impact on product/service prices, choice, quality, and/or innovation. In other words, buyer-led vertical restraints can have the capacity to generate or extend market power to the detriment of consumers. Nevertheless, these arrangements may also offer significant economic benefits through enhancing efficiency, improving quality, and allowing for innovation. In this section, we highlight the potential benefits and anticompetitive effects of buyer-driven restraints at a broad level, with the subsequent section giving more detailed con-sideration to three specific examples.

4.3.1 Beneficial Effects

The European Commission's *Guidelines on Vertical Restraints* provides a useful classification of the efficiency benefits that can arise from vertical restraints, dividing them into seven classes:¹⁴ (i) solving a free-rider problem (causing under-investment), (ii) encouraging new investment (e.g. when otherwise faced with "hold-up" problems), (iii) facilitating new entry into markets, (iv) allowing for a different promotional strategy in different markets, (v) achieving economies of scale in distribution or production, (vi) alleviating capital market imperfections, or (vii) allowing for uniformity and quality

¹³ On how this may operate in regard to retail markets, see Paul W. Dobson, *Relationship between Buyer and Seller Power in Retailing: UK Supermarkets* (2000), in *CASES IN EUROPEAN COMPETITION POLICY: THE ECONOMIC ANALYSIS* (Bruce Lyons ed.) (Cambridge U.P., forthcoming) (manuscript on file with the author).

¹⁴ *Supra* note 3.

standardization. The *Guidelines* focuses its attention on applying consideration of such benefits to seller-driven restraints, with the exception of a brief consideration of exclusive supply obligations (and then only in the context of intermediate goods markets). Nevertheless, it would appear that the same classes of potential benefits apply equally well to consideration of buyer-led restraints, but also taking account of facilitating scale, scope and span economies in purchasing.

To take an example, exclusive supply might be enforced to prevent rival buyers free riding on investments made by a buyer in developing new sources of supply or new product lines, while at the same time encouraging relation-specific investment by the supplier and perhaps financial support by the buyer (e.g. a loan when otherwise raising capital for the supplier might be difficult). Reciprocal buying or tying purchases might be a means to access a new market. Customised product presentation (e.g., in the form of packaging) might be required by a buyer to facilitate a promotional strategy in its downstream markets. Requiring suppliers to use third-party contractors such as for product presentation (e.g., labelling a product supplied to a retailer) might be required to aid uniformity of the buyer's brand image, while a similar requirement for trucking might allow for economies of scale in distribution.

More generally, these and other efficiency benefits typically arise from aligning trading parties' incentives and/or reducing transaction/exchange costs which may afford lower final prices and improved product/service quality to the benefit of the ultimate consumers. Some of these effects can be derived directly (e.g. improved service quality as a result of imposed service requirements; and reduced transaction costs by deliberately limiting the supply base to reduce negotiating, handling, and invoicing costs whilst also allowing for more effective monitoring of supplier performance). Others may arise by altering incentives (e.g. in retailing, overriding discounts may provide a financial reward for increased selling effort on the part of retailer, sale-or-return contracts may encourage the retailer to experiment with new goods, and

contributions towards marketing costs may encourage retailer promotion effort).

However, for efficiency arguments to have a material bearing on the assessment of an individual restraint (especially where there is a noticeable restriction on competition) it should be the case that the purported benefits flow directly from the restraint and that the restraint serves an important role in achieving such benefits (i.e. they would not otherwise likely be attainable to the same degree or with the same efficiency).

4.3.2 Harmful Effects

In regard to the potential negative welfare effects, the three key anticompetitive effects that may arise are commonly expressed as:

- (i) foreclosure of other suppliers or other buyers by raising barriers to entry;
- (ii) reduction of inter-brand competition between the companies operating on a market (including the facilitation of explicit or tacit collusion amongst suppliers or buyers); and
- (iii) reduction of intra-brand competition between distributors of the same brand.¹⁵

While this representation of the negative effects is common, if not standard, the specific wording relates most directly to producer-led restraints in promoting and selling a brand. Clearly, in view of the possibility of retailer-led or other buyer-driven restraints, it makes

¹⁵ This wording follows the EC Guidelines, *supra* note 3 at ¶ 103. In addition, though, and peculiar to the EC's overall political objective of a common market, the EC Guidelines also specify a fourth negative effect "the creation of obstacles to market integration, including, above all, limitations on the freedom of consumers to purchase goods or services in any Member State they may choose".

better sense to express and relate anticompetitive effects directly to the precise level of the supply chain affected, e.g. where competition is prevented, restricted, or distorted at the producer level or the retailer level, and relate this to the type of buyer as well as seller (i.e. consideration of *inter-type* and *intra-type* competition, rather than merely considering effects purely in terms of *inter-brand* and *intra-brand* competition).

More pointedly, there is a need to consider separately the effects on competition at the different levels in the supply chain at which the supplier and buyer operate (taking account of the relevant economic market in each instance). Sometimes, competition can be affected in a very direct manner – such as where restraints are used to foreclose markets through naked exclusion by a dominant buyer or used as a means to facilitate collusion. Often, though, the effects can be subtler, through distorting competition rather than blatant foreclosure. Moreover, when the buyer uses a combination of restraints or the restraints occur in a network of buyers, then there may be a cumulative effect (with one distorting effect reinforcing or building on another).

Consumers may feel the impact of these restraints when they serve to reduce or inhibit product choice, quality and innovation either as a direct consequence of the restraints (through foreclosure effects) or more indirectly when supplier competition is distorted resulting in less intense product competition and/or underinvestment. Consumers may also face higher prices when the restraints operate in a manner that serves to consolidate supplier and buyer positions, thereby reducing the number of effective competitors at each level of the supply chain, giving rise to the possibility of *successive* or *coalescing power* emerging.¹⁶ For instance, in the context of retailing, suppliers may improve the terms and conditions

¹⁶ For a discussion of the circumstances that might give rise to coalescing power as opposed to countervailing power, see Paul W. Dobson, *Competing, Countervailing and Coalescing Forces: The Economics of Intra- and Inter- Business System Competition*, 51 ANTITRUST BULLETIN 175 (2006).

afforded to major retailers while reducing them to smaller retailers – giving rise to the possibility of a so-called “waterbed effect” with distorted retail competition leading to dampened rivalry and ultimately higher prices for consumers.¹⁷

Yet, often the most pronounced effect of buyer-led restraints is on upstream competition without any immediate impact on consumers. For instance, a restraint may reduce producer welfare but may not have a direct or immediate effect on consumers, perhaps only becoming apparent over a long time period when supplier under-investment or distortions to supplier competition result in reduced product quality and/or variety. This can make building an effective case against such practices difficult if legislation or case law relies on a consumer welfare standard rather than a total welfare standard. Also, at least in the short-term, the exercise of buyer power may benefit consumers by reduced retail prices (when cost savings are at least partly passed on), making it difficult to rely on arguments relating to future (and thus inherently less certain) detrimental effects, such as anticipated loss of retail variety and/or product variety/quality.

Even so, a further reason for emphasising consideration of the impact of buyer-driven restraints in sectors like retailing is that buyer power often goes together with seller power, with the exercise of one offering the prospect of reinforcing the other, and vice versa. For instance, when retailers possess seller power in respect of controlling or having key influence over a large consumer base (e.g. by controlling a number of local retail markets), suppliers will be particularly keen to sell their products through that retailer, allowing that retailer greater ability to dictate or negotiate preferential terms and conditions over the suppliers’ other retail customers. Similarly,

¹⁷ See Paul W. Dobson & Roman Inderst, *Differential Buyer Power and the Waterbed Effect: Do Strong Buyers Benefit or Harm Consumers?*, 28 EUR. COMPETITION L. REV. 393 (2007); Paul W. Dobson & Roman Inderst, *The Waterbed Effect: Where Buying and Selling Power Come Together*, 2008 WISCONSIN L. REV. 331 (2008).

with a market-share advantage over small retail rivals, a major retailer may be able to secure preferential terms and conditions (including lower prices and perhaps better quality or differentiated goods), which can then be used to increase its relative advantage in its retail markets. This can allow for yet higher retail market shares for the retailer, thereby extending the likelihood of it obtaining even more preferential terms and conditions from suppliers, and so on. In this way, major retailers may find themselves in a “virtuous circle” (or “spiral”), where buyer power begets seller power, and vice versa.¹⁸ In all of this, buyer-driven vertical restraints may be an important component of the ability to enter and then take advantage of being in this circle – helping the retailer to consolidate its market position and advantage over rivals.

In terms of economic welfare, this may not necessarily be bad from society’s perspective if it allows major retailers to derive increased efficiency from scale, scope and span economies while allowing for healthy competition between them to continue. From a consumer welfare perspective this should not mean that consumers just gain in terms of lower prices, but that they should continue to benefit from easy access to and a wide choice of both products and retail formats/styles. Nevertheless, if the effects of such restraints are to exacerbate differences in competitive positions in retail markets, making them more asymmetric over time, then it is not just access and choice that may suffer, but prices may rise as well as competitive intensity declines.

¹⁸ This concept has been applied in the European Commission’s analysis in the two key retail merger decisions: Rewe/Meinl, Case No IV/M.1221, Rewe/Meinl Decision 99/674/EC, L274 E.C. OFFICIAL JOURNAL 23 (Oct. 1999); Carrefour/Promodès, Case No COMP/M.1684, Carrefour/Promodès Art. 6 & Art. 9 Decisions (Jan. 2000).

4.3.3 Assessing the Balance of Effects in Practice: The Case of UK Grocery Markets

A good illustration of the complexity of buyer-driven arrangements in practice, and the wide range of competitive issues that they throw up, is provided by the UK Competition Commission's detailed investigations of buyer power practices in the UK grocery sector over the last decade. In its *Supermarkets* inquiry concluded in 2000, the Competition Commission identified fifty-two practices associated with retailer buyer power that when practiced by the major multiple grocery retailers could have potentially distorting effects on supplier and/or retailer competition, finding evidence for forty-two of these practices having been used by the major retailers. The Competition Commission grouped these forty-two practices into eight categories in considering their effects on supplier competition and retailer competition and whether they operated or could be expected to operate against the public interest. As summarised in Table 2, the Commission found that thirty of these practices distorted supplier competition, of which eighteen also distorted retailer competition, and overall (after taking into consideration any possible off-setting benefits) deemed twenty-seven practices as operating against the public interest.¹⁹

¹⁹ For the thirty practices found to be distorting supplier competition, the Commission argued that the effect of each was to take away resources required to build brands and introduce new products, thereby reducing innovation and supplier competitiveness in terms of diminished research and development and new investment, along with longer term effects of inducing exit (especially of smaller players) and raising barriers to entry, ultimately reducing quality and choice available to consumers. In terms of the eighteen practices identified as distorting retailer competition, the Commission considered that those major retailers with buyer power would be able to gain a significant advantage over smaller retailers, where (especially middle-ranking) suppliers facing intense buyer power would look for compensation by hardening their terms to these smaller retailers, in the process undermining their viability and also increasing barriers to entry

Table 2 – UK Competition Commission Assessment of Supermarket Supplier Practices (2000)²⁰

Category of Practices	Number of practices	No. practices distorting supplier competition	No. practices distorting retailer competition	No. practices against the public interest
Payments for access to shelf space	8	6	0	4
Imposing conditions on suppliers' trade with other retailers	2	0	0	0
Applying different standards to different suppliers	1	1	1	1
Imposing an unfair imbalance of risk	12	10	10	10
Imposing retrospective changes to contractual terms	8	6	6	6
Restricting suppliers' access to the market	1	0	0	0
Imposing charges and transferring costs to suppliers	8	6	1	5
Requiring suppliers to use third party suppliers nominated by the retailer	2	1	0	1

To remedy the anticompetitive effects, the Competition Commission recommended that a code of practice be established to regulate but not necessarily prohibit these practices. The resulting Supermarkets

into the secondary market for grocery shopping (e.g. convenience stores for top-up shopping), with the knock-on effect that consumers would face higher costs for shopping with these smaller retailers and a reduced choice of retailer.

²⁰ Adapted from UK COMPETITION COMMISSION (2000), *supra* note 7, 2.437-2.550, Table 2.14 and Appendix 11.3.

Code of Practice came into force in March 2002. However, a further two-year sector-wide investigation completed in April 2008 revealed the continued presence of most of these practices. As a consequence, the Competition Commission proposed to replace the existing code with a new one (the Grocery Suppliers Code of Practice). The intention of the proposed code is to tackle more explicitly twenty-six practices concerned with the transfer of excessive risk or unexpected costs to suppliers, viewed as serving as a considerable source of uncertainty for suppliers and acting as a disincentive to investment and innovation as well as potential barriers to entry for small suppliers.²¹

As well as providing extensive analysis into how buyer-driven practices can operate in an anticompetitive manner, the Competition Commission's detailed industry-level investigations on the UK retail grocery sector offer lessons and insights that may apply to other jurisdictions and for other product markets. In particular, three key points stand out. First, that substantial buyer power may be used to anticompetitive effect even when the market share of the retailer appears relatively small (e.g., eight percent of the relevant market), and certainly well below the levels usually associated with seller power giving rise to major anticompetitive concern (e.g. as high as forty percent in the EC context of single-firm dominance). Second, a number of buyer-driven practices may be simultaneously employed by a powerful buyer and in parallel with other powerful buyers, and accordingly cumulative effects may take on some significance (i.e. not just unilateral effects in isolation). Third, the exercise of buyer power, especially in retailing, can manifest itself in many ways and powerful buyers can often adapt and modify their practices to manoeuvre around specific restrictions or prohibitions, and so anti-

²¹ See COMPETITION COMM'N, GROCERY MARKET INVESTIGATION: FINAL REPORT (April 2008), available at http://www.competition-commission.org.uk/rep_pub/reports/2008/538grocery.htm. For further discussion and consideration, see Paul W. Dobson & Ratula Chakraborty, *Buyer Power in the U.K. Groceries Market*, ANTITRUST BULLETIN (forthcoming).

competitive restraints may reappear in different forms (suggesting that regulation may be more effective than prohibition in such instances).

4.4 Specific Examples

The UK Competition Commission's investigations provide some useful guidance and perhaps encouragement to other authorities to investigate similar practices. Nonetheless, the problems in establishing detrimental economic effects (especially when they are long-term and need to be set against perhaps short-term consumer benefits) make buyer-driven restraints and related practices a highly contentious legal and policy area. This is perhaps no better demonstrated in regard to the ongoing controversies surrounding access payments in the form of slotting allowances (i.e. shelf-space fees paid by suppliers to retailers for access to specific in-store locations) and category management services provided by producers for the benefit of key retailers, not least given their growing prominence and practical relevance. This section provides an overview of the issues and relevant economic analysis on these two topics. In addition, this section covers a third area, the matter of exclusive supply arrangements, where they may be a range of detrimental effects, including foreclosure, support for collusion and dampening competition at both the supplier and retailer level.

4.4.1 Slotting Allowances

Slotting allowances and other off-invoice fees²² commanded by retailers from their suppliers have attracted considerable attention in

²² These include listing charges, introductory fees, pay-to-stay levies, failure or removal fees as well as other lump sum payments (i.e. not directly

legal²³ and policy²⁴ circles. A large academic and practitioner literature has built up considering the reasons for the phenomenon and the ultimate effects for competition and consumers. Theories from what might be termed the “Efficiency School” explain slotting fees as arising from the efficient operation of a free market for new products. In contrast, the “Market Power School” maintains that these payments are the product of a non-competitive market or serve to sustain the monopoly power of those involved.²⁵

As Sexton *et al*²⁶ summarise, on the efficiency side, six arguments are often used to explain why slotting fees are levied in the context of a highly competitive, risky environment: (i) as an efficient signal of those products most likely to be successful, (ii) as a screening device by retailers, (iii) as a price that is necessary to equilibrate the number

related to the quantity of goods purchased) demanded by retailers from suppliers.

²³ For summary views on the legality of slotting fees, see Joseph P. Cannon & Paul N. Bloom, *Are Slotting Allowances Legal Under Antitrust Laws*, 10 J. PUB. POL’Y & MARKETING 167 (1991) and Valentine, *supra* note 11.

²⁴ See Fed. Trade Comm’n, Report on the Federal Trade Commission Workshop on Slotting Allowances and Other Marketing Practices in the Grocery Industry (2001). In addition, for some detailed case studies, see FED. TRADE COMM’N, *SLOTting ALLOWANCES IN THE RETAIL GROCERY INDUSTRY: SELECTED CASE STUDIES IN FIVE PRODUCT CATEGORIES* (2003).

²⁵ On the different schools of thought and the views of industry participants, see Paul N. Bloom, Gregory T. Gundlach & Joseph P. Cannon, *Slotting Allowances and Fees: Schools of Thought and the Views of Practicing Managers*, 64 J. MARKETING 92 (2000); and William L. Wilkie, Debra M. Desrochers & Gregory T. Gundlach, *Marketing Research and Public Policy: The Case of Slotting Fees*, 21 J. PUB. POL’Y & MARKETING 275 (2002).

²⁶ RICHARD J. SEXTON, TIMOTHY J. RICHARDS & PAUL M. PATTERSON, *RETAIL CONSOLIDATION AND PRODUCE BUYING PRACTICES: A SUMMARY OF THE EVIDENCE AND POTENTIAL INDUSTRY AND PUBLIC RESPONSES*, Monograph 45 (Giannini Found. Of Agric. Econ., Univ. of Cal., Dec. 2002).

of new products suppliers bring to market with the number that consumers demand, (iv) as a means by which retailers allocate shelf space among competing uses, (v) as a means of sharing the risks of failed products between supplier and retailer, and (vi) as a way for retailers to legitimately cover the costs of removing failed products, thereby charging lower retail prices.²⁷

In contrast, Sexton *et al* summarise the opposing school of thought as using five key arguments in respect of anticompetitive effects arising from slotting fees: (i) that slotting fees represent a means by which retailers signal to other retailers that they will not compete aggressively on the retail price as they have taken their profits upfront;²⁸ (ii) that slotting allowances act as barriers to entry by small independent suppliers, sustaining the monopoly power of larger players; (iii) that off-invoice fees are merely creative ways of implementing two-part, discriminatory pricing schemes among cartels of retail buyers and are rarely uniform among suppliers; (iv)

²⁷ For elaboration of the efficiency arguments, see Kenneth Kelly, *The Antitrust Analysis of Grocery Slotting Allowances: The Procompetitive Case*, 10 J. PUB. POL'Y & MARKETING 187 (1991); Mary W. Sullivan, *Slotting Allowances and the Market for New Products*, 40 J.L. & ECON. 461 (1997); Martin A. Lariviere & V. Padmanabhan, *Slotting Allowances and New Product Introductions*, 16 MARKETING SCI. 112 (1997). For some empirical evidence on efficiency benefits based on a specific retailer, see Joshua D. Wright *Slotting Contracts and Consumer Welfare*, 74 ANTITRUST L. J. 439 (2007).

²⁸ For a formal treatment of slotting fees as a buyer-led strategic means of reducing competition, see Greg Shaffer, *Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices*, 22 RAND J. ECON. 120 (1991). Here it is shown that among retail oligopolists, competitors in the same market may signal their intention of not competing aggressively on price by charging high slotting fees to suppliers while agreeing to pay these suppliers a relatively high unit transfer price. This is individually and jointly preferable as the higher unit transfer price raises the retailer's marginal cost thereby reducing its ability and willingness to set low retail prices, in turn influencing rivals not to set low prices. In this way, channel profit as a whole is higher and all members potentially benefit.

that, by monopolising a distribution channel, suppliers who pay slotting fees significantly raise costs for their rivals, thereby harming the rivals' ability to compete;²⁹ and (v) that slotting fees increase the total cost of bringing new products to market and thus reduce the rate of innovation.

Given that there may be both efficiency and market power explanations for slotting allowances, antitrust and academic attention has increasingly focused on more specifically identifying, distinguishing and elaborating upon those circumstances where competition is most likely to be adversely affected resulting in harm to consumers. In particular, and as extensively detailed by Gundlach,³⁰ much of this attention has focused on the exclusionary role that slotting allowances may serve where dominant suppliers may condition their payments to retailers on requirements that disadvantage their (smaller) rivals, leading to anticompetitive exclusion. Other attention, particularly in the European context, has centred on how dominant retailers may be able to use slotting allowances and off-invoice fees by the exploiting suppliers' dependency to shift risk, undermine supplier investment and distort supplier competition.³¹

In addition, a concern has arisen, notably in situations where below-cost selling is prohibited, that off-invoice payments may be used as a facilitating device to effect price coordination at the retail level. Here, artificially high invoiced supply prices can act as a base

²⁹ This view represents an application of the notion of raising rivals' costs to induce their exit or impede their ability and/or willingness to compete aggressively on prices. See Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209 (1986).

³⁰ GREGORY T. GUNDLACH, ANTITRUST ANALYSIS OF EXCLUSIONARY ARRANGEMENTS INVOLVING SLOTTING ALLOWANCES AND FEES: ISSUES AND INSIGHTS, Working Paper 05-03 (Am. Antitrust Inst., 2005).

³¹ For evidence and analysis in regard to UK grocery retailing, see COMPETITION COMM'N 2008, *supra* note 21, §9 and Appendices 9.8 and 9.9.

from which to set high retail prices with retailers compensated through off-invoice lump-sum payments.³²

4.4.2 Category Management

Category management is essentially a retailer/supplier process of managing in-store product categories as strategic business units, ostensibly intended to produce enhanced business results by focusing on delivering consumer value. This merchandising approach has gained popularity among US retailers, predominantly in the grocery sector, over recent years. Particular concern about category management relates to the practice of (some) retailers handing over their category management to manufacturers that provide these services in their roles as “category captains”. This has, for example, been the focus of an inquiry by the Federal Trade Commission,³³ in view of the potential for some manufacturers to use slotting and category captaincy as complementary mechanisms for gaining influence over retailers and helping them to exclude or disadvantage their rivals.³⁴

³² On the theory of how this may operate, see Jeanine Miklos-Thal, Patrick Rey and Thibaud Vergé, *Buyer Power and Intra-brand Coordination*, IDEI Working Paper, No. 500, January 2008. For empirical evidence, see Pierre Biscourp, Xavier Boutin and Thibaud Verge, *The Effects of Retail Regulations on Prices: Evidence from French Data*, May 2008, http://www.insee.fr/en/publications-et-services/docs_doc_travail/g2008-02.pdf.

³³ Fed. Trade Comm’n (2001), *supra* note 24.

³⁴ Specifically, payments including those for slotting that are offered by manufacturers may represent a formal quid pro quo to gain influence, but when acting as category captain, a manufacturer may be gaining influence less overtly. See Robert L. Steiner, *Category Management – A Persuasive, New Vertical/Horizontal Format*, 15 ANTITRUST 77 (Spring 2001).

While in many instances, category management undoubtedly offers efficiency benefits for retailers that may, through the normal process of competition, benefit consumers there are a range of anticompetitive concerns with category management. These concerns are well summarized and articulated by Desrochers *et al.*³⁵ In particular, supplier competition may be distorted if, due to the category captain's influence, rival suppliers are foreclosed or disadvantaged (say, by poor shelf space allocation and placement). In addition, there is a broad concern relating to the possibility of information exchange facilitating collusion at several levels. First, information exchange may take place between rival suppliers. Secondly, when the same manufacturer acts as a category captain for different re-tailers, the category captain may be a conduit for information exchange between rival retailers. Thirdly, when the retailer also offers private labels (so operates as a "double agent" for branded goods suppliers), communications between the category captain (typically a brand producer) and the retailer may be considered as communication between rivals.

Certainly, category management is worthy of both more theoretical and empirical work. Unlike the analysis of slotting allowances, where the literature has mushroomed over recent years, economic research on category management and the vertical as well as horizontal competition issues it raises is still to fully unfold. Never-theless, there is a pervading view that category management may be an important catalyst, amongst other industry developments, in "copper-fastening" big retailer and big producer positions to the disadvantage of smaller retailers and smaller producers.³⁶ Ultimately this may be to the detriment of consumers when it results in less retail and product variety and/or leads to higher retail prices as a

³⁵ Debra M. Desrochers, Gregory T. Gundlach & Albert A. Foer, *Analysis of Antitrust Challenges to Category Captain Arrangements*, 22 J. PUB. POL'Y & MARKETING 201 (2003).

³⁶ These concerns have also surfaced in Europe. See Dobson Consulting, *supra* note 12, Appendix 3.

consequence of “coalescing power” amongst the major players.³⁷ It may also be a facilitating practice for collusion through the information exchanges between producers and the different retailers to which they provide category management.³⁸ Alternatively, category management may be viewed as just an innocent aspect of the drive for ever-improving retailer efficiency and the competitive pressure to lower prices and improve choice and quality to the benefit of consumers.

4.4.3 Exclusive Supply Arrangements

The potential anticompetitive effects of exclusive supply arrangements have featured in a number of cases, of which the *Toys“R”Us* case³⁹ has received particularly extensive commentary.⁴⁰ In these instances, one or more suppliers agree to supply a buyer on an exclusive basis to the extent that they do not supply rival buyers with either directly equivalent or even any other products. There may be efficiency reasons for this arrangement. For example, the buyer may wish to protect a trading-specific investment (e.g. in the production process or design of the product, such as may apply to private label products). However, there may well be anticompetitive concerns as the practice may *de facto* reduce intra-brand competition (making it more difficult for consumers to shop elsewhere for the identical product). At its most serious, when there are very few

³⁷ Paul W. Dobson, *Competing, Countervailing, and Coalescing Forces: The Economics of Intra- and Inter-Business System Competition*, 51 ANTITRUST BULLETIN 175 (Spring 2006).

³⁸ For a discussion of the issues, see COMPETITION COMM’N 2008, *supra* note 21, Appendix 8.1.

³⁹ *Toys“R”Us, Inc. v. Federal Trade Comm’n*, 221 F.3d 928 (7th Cir. 2000).

⁴⁰ For a summary of the case and other cases involving exclusive supply arrangements, see Valentine, *supra* note 11.

supply alternatives, such an arrangement may lead to a foreclosure problem at the buyer level. However, even if complete exclusion is not feasible, it may still be possible that such an arrangement can profitably serve to reduce competition (due to its partial exclusion effects). I briefly examine both of these possibilities in turn.

In the context of foreclosure, and with particular application to the *Toys“R”Us* case, a very neat model by Comanor and Rey⁴¹ demonstrates how an exclusivity agreement between an established retailer and an established producer would be of mutual interest to deter entry at the retail level. Here, the rationale for entry deterrence is that the arrival of a new and more efficient distributor not only fosters competition at the distribution stage but also triggers competition between two vertical structures; the profits of both incumbents would thus decline, which motivates the exclusionary agreement. The starting point, though, is that a large established retailer has bargaining power over its current suppliers because of its influence over consumers' buying decisions; as a result, it may secure suppliers' loyalty and successfully deter the entry of a more efficient rival.

To see how this works, consider a setting where at the retail level there is an established retailer facing (potential) competition from a new, more efficient rival (viewed as either a new or potential new entrant with a lower cost base, like a discounter or warehouse club). While at the producer level, there is a unique established (brand) producer. In addition, though, the established retailer has access to

⁴¹ William S. Comanor & Patrick Rey, *Vertical Restraints and the Market Power of Large Distributors*, 17 REV. INDUS. ORG. 135 (2000). For a discussion of this model and related work on foreclosure relating to retailer buyer power, see Patrick Rey, *Retailer Buying Power and Competition Policy*, in INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW 2000 487 (Barry Hawk ed., Juris Publishing, 2001). For further elaboration in the context of the case, see Patrick Rey and Thibaud Vergé, *The Economics of Vertical Restraints*, in HANDBOOK OF ANTITRUST ECONOMICS 353 (Paolo Buccirossi ed., MIT Press, 2008).

alternate (but less efficient) suppliers (say, because its reputation allows it to sponsor new brand entry, but at some cost, in a way that the new retailer could not). In principle, then, the established retailer and the established producer enjoy some, albeit limited advantages over their respective (potential) rivals.⁴² The established retailer has alternative suppliers that its rival cannot access, but operates at a cost disadvantage to its rival. The established producer has a potentially captive customer in the form of the new retailer, but the established retailer could de-list it in favour of using alternative (but less efficient) suppliers.

In this setting, economic welfare is best served by letting the new retailer enter, and this would certainly occur in the absence of vertical restraints (given that the established producer would, if it were unrestricted, wish to see its products distributed as widely as possible). However, building on its strategic second-sourcing advantages, the established retailer is in a position to convince the established supplier to enter into an exclusive trading arrangement that serves to deter entry of the new retailer. The intuition is that the incumbent supplier cannot completely eliminate the established retailer (because even if the suppliers entered into an exclusive arrangement with the new retailer, the established retailer could buy from second-source suppliers and exert a competitive pressure). Consequently, if the established producer supplies the new retailer, competition is intensified not just at the retail level, but also for the industry as a whole. In contrast, by granting an exclusive supply agreement to the established retailer, the incumbent supplier *de facto* excludes the new retailer and thus eliminates any competitive pressure in the industry. Comanor and Rey then show that when second-source suppliers are not too inefficient (so that their entry

⁴² Lying behind this idea is the view that consumers' perceptions of product quality depend on the characteristics of both the manufacturer and retailer. Specifically, consumers may be reluctant to buy an unknown product in an unknown store and, more generally, they value products more when at least one well-established firm is involved.

would result in substantial competition) the incumbent firms are better off excluding the new retailer. In these circumstances, the established supplier can be convinced to grant an exclusive supply/dealing arrangement to the established retailer.

Comanor and Rey thus provide an interesting insight into foreclosure motives in a specific context of asymmetric positions (where the respective incumbent firms hold a market advantage at their particular level of the supply chain). However, with more symmetric positions, where oligopolistic retailers and oligopolistic producers respectively compete on a more equal footing, complete exclusion is unlikely but there may still be incentives to enter into exclusivity arrangements in order to dampen competition (i.e. in a partial exclusion sense). For instance, Dobson and Waterson⁴³ examine the situation where oligopoly competition characterizes both production and retailing, with both differentiated products (e.g. different brands) and differentiated retailers (e.g. by their service and/or location). They show that pairs of trading firms may be willing to restrict their trading options (i.e. retailers sell a narrower range and producers supply fewer retailers) by individually committing to an exclusive trading arrangement when these serve to restrict competition (by reducing profit-harming horizontal externality effects) and offer more nearly optimal pricing (i.e. internalize vertical externality effects so that transfer prices are determined to maximize joint profits⁴⁴). The mutual desirability for

⁴³ Paul W. Dobson & Michael Waterson, *Exclusive Trading Contracts in Successive Differentiated Duopoly*, 63 S. ECON. J. 377 (1996).

⁴⁴ Specifically, it is assumed that in the absence of an exclusive trading agreement, a producer sets a linear transfer price to maximize its profit. Retailers in turn take this price as given in setting their final prices to consumers to maximize their own individual profit. By contrast, if a retailer and a producer sign an exclusive trading contract, it is assumed that the transfer price is determined so as to maximize their joint profit, with that profit being distributed between the parties by means of (positive or negative) franchise fees or similar devices, if necessary. Because raising

exclusive supply arrangements is likely to be strongest when both inter-brand rivalry and intra-brand rivalry are strong (i.e. when consumers perceive respectively products and retailers to be close substitutes). When the products are highly substitutable, the retailer suffers less of an impact on lost sales from selling a narrower range (when exclusivity agreements are in place). When retailers are highly substitutable, vertical separation arguments come into play, with competition softened by commitments to high transfer prices which in turn feed through to higher retail prices.⁴⁵

Dobson and Waterson show such exclusivity arrangements are not necessarily socially undesirable, given that there is a trade-off between reduced consumer choice and socially more efficient transfer pricing. However, as interbrand and intrabrand rivalry intensifies, all prices (regardless of supply arrangements) fall towards marginal costs. Hence, the key issue for social welfare becomes variety and, despite their being small, the benefits of variety lead to the absence of agreement being the best social outcome. In contrast, when interbrand and intrabrand competition is more moderate then exclusivity agreements can lower prices (due to socially more efficient transfer pricing), possibly to the extent of outweighing the loss in variety created by the agreement.⁴⁶

input prices softens final market competition, this transfer price involves a non-zero mark up on the producer's costs, but is treated as given in fixing the final price level. For more on these commitment aspects to soften competition in this and related settings, see Andreas Irmen, *Precommitment in Competing Chains*, 12 J. ECON. SURV. 333 (1998).

⁴⁵ In contrast, when neither of these market conditions applies (i.e. when both products and retailers are perceived as substantially differentiated), there are substantial benefits to retailers having a wider range, and producers have less to fear from competition, so exclusivity agreements are unlikely.

⁴⁶ For related analysis examining the competition dampening effects of resale price maintenance, see Paul W. Dobson and Michael Waterson, *The*

Accordingly, as with Comanor and Rey's analysis, much depends on the precise specification of the market circumstances as to whether exclusive supply arrangements are overall harmful to competition. While there may be efficiency benefits from such arrangements, both analyses show that there are conditions where foreclosure or competition dampening effects dominate and serve against both consumer and social welfare.

4.5 Conclusion

As with other classes of vertical restraints, economics has identified that buyer-driven vertical restraints can offer both efficiency benefits and anticompetitive effects. This points to the need for to apply a general *rule-of-reason* approach for consideration of these restraints. Economic analysis points to the main competition concerns with buyer-driven restraints arising when one or both sides of the market are concentrated and/or dominated by one or a few major players. In such circumstances, buyer-driven vertical restraints may be a particular concern when they serve to foreclose markets (by directly reducing consumers' choice of products and/or distribution services) or lessen price competition (either by facilitating collusion or strategically dampening competition). Nevertheless, existing work in this field is still limited and further theoretical and empirical contributions are much needed to build up a more complete picture of the circumstances where anticompetitive effects are likely to dominate efficiency benefits, and vice versa.⁴⁷

Competition Effects of Industry-wide Vertical Price Fixing in Bilateral Oligopoly, 25 INT'L J. INDUS. ORG. 935 (2007).

⁴⁷ The lack of empirical work on buyer-led restraints is evident from a number of recent surveys on empirical analysis of vertical restraints. For instance, see James C. Cooper, Luke M. Froeb, Dan O'Brien, and Michael G. Vita, *Vertical Antitrust Policy as a Problem of Inference*, 23 INT'L J. INDUS. ORG.

In the specific context of retailing, the apparently relentless rise in retail concentration in most retail sectors experienced by developed countries suggests that even if competition authorities do not yet face problems due to retailer power then they almost inevitably will at some point in the future. Even the much heralded emergence of Internet retailing as a major competitive force will not necessarily mean that retail competition will always be kept keen, given that firms will never willingly submit themselves to Bertrand-type competition and instead will always look to ways of differentiating themselves or competing in new or different arenas rather than face remorseless head-to-head competition. One way by which retailers may seek to achieve this, as this article has shown, may be through buyer-driven restraints to build or enhance market power. In this regard, competition authorities must be vigilant and courts aware of the danger posed by unchecked retailer buyer power when it manifests itself in competition-reducing or competition-eliminating vertical restraints.

Finally, at a point in time where policy treatment towards vertical restraints is under consideration and review (e.g. with the EC's block exemption regulation due to expire in 2010), there is a critical need to take greater account of buyer-driven restraints and set out a clear policy framework which can address a much broader range of practices than the present policy focus on seller-led vertical restraints and its concerns focused predominantly around brand supply and distribution.⁴⁸ Consumer welfare depends on the

639 (2005); Frederic M. Scherer, Robert L. Steiner and William S. Comanor, *Vertical Antitrust Policy as a Problem of Inference: The Response of the American Antitrust Institute*, (American Antitrust Institute Working Paper No. 05-04, April 2005); Francine Lafontaine and Margaret E. Slade, *Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy*, in HANDBOOK OF ANTITRUST ECONOMICS (Paulo Buccirossi ed., MIT Press, 2008).

⁴⁸ For further suggestions of issues for consideration in reviewing EC policy towards vertical restraints, see Paul W. Dobson, *EU and UK Vertical*

efficient functioning of supply chains and effective choice and innovation at all levels. Seller power can undermine such desirable outcomes, but so too can buyer power. The policy challenge is to come up with workable rules and guidance that will protect competition and serve the consumer's interest while allowing both buyers and sellers sufficient freedom to adopt and experiment with trading practices that can promote efficiency, choice and innovation. Crucially, this needs to apply to all types and sources of vertical restraints.

5 Price Control in Vertical Relations

*Patrick Rey*¹

5.1 Introduction

While the legal treatment of vertical restraints has often been subject to more controversy than other areas of competition policy, until recently there was a relative consensus among competition agencies and courts favouring a tougher attitude towards price restraints, such as resale price maintenance (RPM) and its variants (e.g., price floors). In contrast, the economic literature on vertical restraints did not appear to support such a tougher attitude. Theoretical and empirical studies had identified efficiency as well as anticompetitive motives benefits for both price and non-price restrictions and, on the whole, price restrictions did not emerge in a worse light than non-price restrictions. This paper first briefly reviews the insights of the economic literature and its implications for the comparison between price and non-price restraints, and then presents recent research highlighting additional anticompetitive effects of price control restrictions. It then draws some conclusions for competition policy towards price restraints.

¹ This paper was prepared for the Pros and Cons of Vertical Restraints Seminar held by the Swedish Competition Authority, Stockholm, Sweden, November 7, 2008. It is based on joint papers with Bruno Jullien, Thibaud Vergé and Jeanine Miklós-Thal.

5.2 Lessons from the Economic Literature for Price and Non-Price Restrictions

The economic effects of vertical restraints have been grouped into two general categories, which I briefly review below, which respectively focus on vertical intrabrand co-ordination and on interbrand competition. I do not aim here at an exhaustive survey of the literature² but rather draw its implications for the comparison between price and non-price restrictions.

5.2.1 Vertical Coordination

Together, a manufacturer and its distributors form a vertical structure, and within this vertical structure the decisions of each firm contributes to determine the efficiency with which products and services are supplied. Many of these decisions (on pricing, quality, retail effort, and so forth) not only affect the profit of the firm (distributor or manufacturer) making the decision, but affects as well the profits of the other firms. If each firm acts independently, it will ignore these spill-over effects and, pursuing its own interest, will fail to maximize the aggregate profits of the vertical structure.

Firms thus have an incentive to adopt provisions enhancing vertical coordination, in order to achieve better efficiency and increase the joint profits of the vertical structure. Vertical restraints can enhance coordination in different ways. First, they can give manufacturers direct control over distributors' decisions, e.g. by giving them the right to specify retail prices and services. 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 its decisions on aggregate profits. Third, where there are spill-over effects between distributors,

² Rey and Vergé (2007) provide a more comprehensive recent survey of the economic literature on vertical restraints.

vertical restraints can alter intrabrand competition to reduce the externality; for example, granting exclusive territories may help solve free-riding in the provision of retail services. In practice, different combinations of vertical restraints may be used to deal with a particular set of problems.

I briefly review below the main types of arguments along these lines.

Double Marginalization

Vertical restraints that improve vertical co-ordination may increase economic efficiency as well as profits. This is for example the case of provisions that eliminate double marginalization³ problems. When a manufacturer and its retailer both enjoy market power, they will exploit this market power by increasing their prices above cost; each mark-up will reflect a trade-off between the impact of a price increase on volume and margin, but will typically ignore the impact of this price increase on the other party's profit. As a result, the addition of mark-ups will lead to retail prices that are not only above costs, but also above the desirable level for the vertical structure as a whole.

Various types of vertical restraints can be used to remove this coordination failure, including price provisions such as resale price maintenance (price ceilings), and non-price provisions such as two-part tariffs (by introducing alternative means of sharing the profits). And any such solution to double marginalisation problems increases economic efficiency, since both profits *and* consumer surplus increase.

³ See Spengler (1950).

Incentives to Provide Services

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 on reputation. Similarly, provisions that allow the vertical structure to realize more of the productive value of investment in know-how may efficiently encourage such investment.

Firms seek to maximize their profits, however, and this may or may not be in line with economic efficiency.⁴ As a result, the choice of product quality or retail service that maximizes profit does not necessarily maximize consumer surplus or total surplus;⁵ 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.⁶ The greater the competition from other suppliers faced by the vertical structure, however, the more it will be led 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. Yet, Shaffer (1991) shows that even competitive suppliers might rely on vertical restraints such as slotting allowances and RPM in order to soften retail competition at the expense of consumers and society.

What are the implications for the comparison between price and non-price restrictions? Despite the potential divergence between private and social interests just highlighted, this strand of literature

⁴ Even in the case of double marginalization problems, Rey and Tirole (1986) show that a divergence may arise between the private and social interests when local market conditions on demand or distribution costs are uncertain and retailers are risk-averse.

⁵ In the same way that, when choosing the quality of its products, a firm will consider its impact on demand, and thus on marginal consumers, and thus ignore the impact on infra-marginal consumers. See Spence (1975).

⁶ See Scherer (1983), Comanor (1985) and Caillaud and Rey (1987).

is often perceived as "favourably ambiguous" and justifying a lenient attitude towards vertical restraints – admittedly, identifying the particular instances in which restraints may be used to enhance vertical coordination and profits at the expense of consumers and society might be difficult and costly in practice, as this would require a detailed analysis of fine-level data on cost and demand conditions. Besides this favourable ambiguity, it can however be noted that this literature does not provide a good basis for differentiating the attitude towards price and non-price restrictions. Indeed, firms can often use either non-price restrictions such as non-linear tariffs (including franchise fees, royalties, slotting allowances, and so forth) or territorial exclusivity provisions, or price restrictions such as RPM,⁷ in order to achieve a better coordination of their decisions, irrespective of whether this is in line with the social interest.⁸

Supplier Opportunism

Another strand of literature has identified a different form of coordination failure, which arises when commitment problems and the temptation of opportunism prevents a supplier from fully exploiting its market power. In the same way that, once the owner of a patent has already sold a license, it may be tempted to issue additional licenses – at the expense of the first licensee, who will then face tougher competition – a supplier may be tempted to supply larger volumes to its customers than what would be required to

⁷ See for example Marvel and McCafferty (1984).

⁸ Interestingly, when analyzing pricing coordination problems with local shocks on demand or retail costs, Rey and Tirole (1986) find that while vertical restraints may be adopted when "pure" intrabrand competition would be socially preferable, RPM is always dominated by either intrabrand competition or exclusive territories with franchise fees. This analysis thus provides an example where non-price restrictions might be socially harmful, whereas price restrictions would not be adopted for that purpose.

maintain prices at the appropriate level. This risk of opportunistic behaviour is more likely to be a concern when contracts are not observable by rivals or in the case of sequential negotiations.⁹

O'Brien and Shaffer (1992) study this commitment problem with price competition in the downstream market and show that vertical restraints, including exclusive territory provisions but also industry-wide price floors or bilateral price ceilings, can, by eliminating downstream (intra-brand) competition, allow the supplier to overcome the commitment problem and avoid any risk of opportunistic behaviour. Both price and non-price restraints thus again allow the firms to achieve greater profits, although this is here at the expense of final customers and society, since in effect the restraints enhance the exercise of market power.

5.2.2 Interbrand Competition

Vertical restraints can also affect the extent of competition among rival vertical structures. I briefly discuss below the main types of argument along this line.

Sham Vertical Agreements

Since most vertical restraints eliminate or at least reduce downstream competition, firms may rely on them to circumvent anti-cartel laws through "sham vertical agreements" with a pseudo upstream partner. Although this is an obvious misuse of vertical restraints, likely to be banned in most countries, occasional examples occur from time to time.¹⁰

⁹ See Hart and Tirole (1990), O'Brien and Shaffer (1992), McAfee and Schwartz (1994), Rey and Vergé (2004) and White (2007).

¹⁰ In Switzerland, bookstores used to operate a legal cartel, subject to oversight by a cartel office; when the office started to increase pressures on

Both price and non-price restrictions can again serve this purpose, however. For example, dividing the market into exclusive territories or fixing prices through a market-wide RPM provision provide equally effective ways to eliminate competition in the market.

Dampening Competition

Vertical restraints can also have an impact on the strategic interaction between rival vertical structures. By altering the nature of intrabrand competition within its retail network, a manufacturer can influence how it will respond to rivals; this in turn indirectly affects the behaviour of these rivals, and thus the nature of interbrand competition. For example, assigning exclusive territories reduces intrabrand competition within a distribution network, but also reduces interbrand competition between rival manufacturers by reducing their incentives to undercut each other.¹¹ The idea is that intrabrand competition tends to make retailers mainly sensitive to their own wholesale prices. In contrast, by relaxing the pressure from

prices, the bookstores first tried to negotiate a moderate price decrease and then decided to abandon the legal cartel, and adopted instead a single intermediary - a Swiss law firm - to handle all trade between German publishers and Swiss bookstores – with RPM as part of their contracts.

¹¹ See for example Rey and Stiglitz (1988, 1995). A similar idea has been formulated by Vickers (1985) and further explored by Bonanno and 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 and Staelin (1983)), while other contributions have enriched the delegation model; see for example Gal-Or (1991). Caillaud and Rey (1995) offer a survey of this strategic delegation literature, and Slade (1998) provides a nice empirical validation, using the UK Beer Orders as a natural experiment.

intrabrand competition, exclusive territory provisions gives retailers' more flexibility in their pricing decisions; as a result, retailers will take advantage of any increase in rivals' prices and tend to increase somewhat their own prices in response. This, in turn, encourages rivals to increase their prices and thus attenuates the intensity of interbrand competition between rival vertical structures. In other words, granting exclusive territories not only reduces intrabrand competition, but it dampens interbrand competition as well.

All vertical restraints may not serve such competition-dampening motives, however. Indeed, the key here is to use vertical restraints to influence how the vertical structure responds to its rivals, and this can only be achieved by "delegating" some decision-making to the distributors. In the above example, for instance, granting exclusive territories gives more freedom to distributors in the choice of their prices. In contrast, vertical restraints such as resale price maintenance increase manufacturers' control of downstream pricing decisions and hence cannot serve such a purpose (in the above example, resale price maintenance would lead to more direct, head-to-head competition between manufacturers and would thus tend instead to intensify interbrand competition).

Stimulation of Investment and Entry

Vertical restraints can also have various longer-term impacts on markets. They may for example contribute to promote entry and thus interbrand competition. This is indeed the case whenever they increase profits, be it through enhanced vertical coordination (and whether or not this is a good thing for consumers or society in the short-term) or competition-dampening effects among those who effectively enter the market.

This line of argument applies to price restrictions as well as non-price restraints. Both types of provisions can for example be offered to convince a distributor to help a manufacturer enter a new market. In the same vein, by increasing the returns on investments in

know-how, branding and so forth, vertical restraints that encourage such investments also promote the entry of new brands and new retailers.

Market Foreclosure and Entry Barriers

Vertical restraints can however also be used to foreclose markets and deter the entry of potential competitors. There is an abundant literature on this topic which, in response to the Chicago critique of the original “monopoly leverage theory”,¹² has identified circumstances in which incumbent firms may indeed have both the capability and the incentive to engage in practices that harm rivals and/or limit their access to markets.¹³

Interestingly for our purpose, however, the restraints associated with foreclosure concerns are usually non-price provisions such as exclusivity clauses, tying practices, and so forth, rather than price restrictions such as RPM.

¹² The Chicago School – see for example Bork (1978) and Posner (1976) – countered the “leverage” concept by noting that a bottleneck monopolist can already earn the monopoly profit generated by a vertical structure without extending its market power to related segments; thus, in the absence of efficiency gains, vertical integration or restraints could not increase the profitability of the firms. In the same vein, the Chicago critique questioned the rationale for excluding downstream competitors who, by offering product diversity, cost efficiency, and so forth, could generate additional profits.

¹³ Pioneering works in this area include for example Aghion and Bolton (1987) on penalties for breach and exclusionary provisions, Rasmussen, Ramseyer and Wiley (1991) on exclusive dealing or Whinston (1990) on tying. Rey and Tirole (2007) offer a recent survey of the literature on vertical and horizontal foreclosure.

5.2.3 Price Versus Non-Price Restrictions

I now draw some general implications of the literature for the assessment of vertical restraints, and then focus on the comparison between price and non-price provisions.

General Lessons for Vertical Restraints

Several lessons can be derived from this brief overview. First, no simple conclusion can be drawn whereby any particular type of vertical restraint -- territorial restrictions, tie-ins, RPM, etc. -- will inevitably improve economic efficiency or reduce it. Both price and non-price restrictions may either increase and decrease efficiency, and have 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 also be used by manufacturers to dampen interbrand 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 particularly the intensity of competition between rival vertical structures, or whether manufacturers distribute their goods through independent or common retailers, is a key factor for assessing the effects of vertical restraints. Where a vertical structure faces strong competition from both other brands and other retailers, there is little potential for any type of vertical restraint to reduce economic efficiency. Strong competition at both levels fosters efficiency of both supply and distribution services. Hence, if the market structure – level of concentration, conditions of entry, market dynamics, and so forth – ensures 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.¹⁴

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 increase efficiency. For example, economic analysis identifies circumstances in which exclusive dealing might be used to raise entry barriers and circumstances in which reduced intrabrand competition might increase efficiency by preventing free riding.

Should Price Restrictions be Treated More Severely?

Another lesson from the literature briefly reviewed above is that, in contrast with their harsher treatment in case law, price restrictions do not appear to perform worse than non-price provisions. Instead, both types of restrictions appear to be rather substitutes in the case of efficiency-enhancing arguments as well as for some anticompetitive effects, and in addition some anti-competitive effects are specifically attached to *non-price* restrictions.

Indeed, both price and non-price restraints can help enhance vertical coordination. While this may have sometimes ambiguous effects on consumers and society, it does not allow distinguishing price from non-price restrictions, and thus does not support a

¹⁴ Competition in the market as a whole is what matters here, and not intrabrand competition as such. With sufficient competition from other brands and retailers, vertical restraints within a particular chain cannot reduce economic efficiency, even if intrabrand competition is completely eliminated – this, however, leaves open the analysis of “cumulative effects”, when a practice is adopted throughout the industry.

tougher attitude towards price restrictions.¹⁵ Similarly, both types of restrictions can, by allowing firms to earn greater profits, contribute to stimulate investment and entry in new markets.

If we turn to anti-competitive effects, we can first observe that both price (e.g., price floors) and non-price restraints (e.g., territorial protection) can be included in sham agreements in order to avoid competition in a market; so this line of argument does not seem to provide a basis for a differentiated treatment. In contrast, competition-dampening effects rely on the notion of "strategic delegation" to retailers, and therefore concern provisions such as exclusive territories, which indeed give retailers greater flexibility in their pricing decisions, but *not* resale price maintenance, which gives instead manufacturers greater control over retail prices. Therefore, this line of argument calls for a tougher treatment towards non-price restrictions. Similarly, foreclosure concerns are usually associated with exclusive dealing and tying provisions rather than with price restraints such as resale price maintenance.

There thus exist a relative discrepancy between the harsher treatment of price restrictions (particularly price floors) observed in practice in many jurisdictions and the lessons from the literature reviewed above. Recent works stress two anticompetitive effects that are specifically attached to resale price maintenance: Jullien and Rey (2007) revisit an old concern sometimes voiced in antitrust cases, which is that RPM could facilitate upstream collusion among rival manufacturers, while Rey and Vergé (2008) analyze the impact of RPM within "interlocking relationships", that is, when competing manufacturers distribute their goods through the same competing retailers. I describe below the findings of these analyses.

¹⁵ Note moreover that, while double marginalisation problems suggest a more open attitude towards price ceilings, free-rider arguments militate instead in favour of price floors; similarly, the more negative arguments based on supplier opportunism apply to both price floors and price ceilings – they thus do not justify a more lenient attitude towards price ceilings.

5.3 RPM as a Facilitating Practice

One argument made informally against RPM is that it facilitates horizontal agreements. For example, in *Business Electronics* the US Supreme Court repeated the argument already mentioned in *Sylvania*:

“Our opinion in *GTE Sylvania* noted a significant distinction between vertical non-price and vertical price restraints. That is, there was support for the proposition that vertical price restraints reduce inter-brand price competition because they ‘facilitate cartelizing’.”¹⁶

The Court mentions the argument for retail cartels, along the “sham agreement” line discussed above, but also for manufacturer cartels. There it asserts that price restrictions could reduce a manufacturer's incentive to cheat on a cartel agreement by preventing its retailers from passing on lower prices to consumers. This argument, previously developed by Telser (1960), supposes however that manufacturers could and would commit to retail prices for longer periods than in the case of wholesale prices – otherwise a manufacturer could “cheat” by modifying both retail and wholesale prices (RPM might actually make such deviation more appealing, by ensuring that a cut in wholesale prices is not partially appropriated by retailers).

Mathewson and Winter (1998) interpret instead this facilitating practice argument in terms of market transparency. They argue that if “wholesale prices are not easily observed by each cartel member, cartel stability would suffer because members would have difficulty distinguishing changes in retail prices that were caused by cost changes from cheating the cartel. RPM can enhance cartel stability by eliminating retail price variation.”¹⁷ In Jullien and Rey (2007), we explore this formally and show indeed that manufacturers can have an incentive to adopt RPM in order to maintain more uniform retail

¹⁶ *Business Electronics Corp. v. Sharp Electronics*, 485 U.S. 717 (1988) at 725. See also *Continental T.V. Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977).

¹⁷ See Mathewson and Winter (1998) at 65.

prices, so as to make price cuts easier to detect and therefore to punish.

The underlying intuition is as follows. In the absence of RPM, retail prices are driven by wholesale prices but also by local shocks on retail costs or demand. Therefore, observing retail prices do not allow manufacturers to infer perfectly the wholesale prices; as a result, deviations from a collusive agreement cannot be easily identified. In contrast, with uniform retail prices manufacturers can detect deviations at once, making collusion easier to sustain.

There is a catch, however: as retailers no longer respond to changes in cost and demand conditions, efficiency of the transmission chain is reduced, which limits profits. Manufacturers thus have to trade-off this inefficiency against the benefits of collusion. Yet, we show that the gains from enhanced collusion can indeed offset the loss generated by rigid prices.

We also show that there is a conflict between private and social interests. This is particularly clear when local shocks mainly affect retail costs, since in that case RPM not only results in higher prices (on average), but moreover prevents them from reflecting changes in cost conditions (which is bad for consumers and society as a whole).¹⁸ The impact of RPM is potentially more ambiguous when local variations mainly concern the demand side, since by itself price rigidity is then good for consumers and society; we show however that RPM is still likely to be undesirable, since manufacturers will tend to adopt RPM precisely when doing so increases average prices by so much that consumers' and total welfare are reduced.

Other forms of price restrictions, such as price floors, may also limit retail price flexibility and thus facilitate collusion among manufacturers. Conversely, non-price vertical restraints often

¹⁸ For a given average price level, consumers tend to favour stochastic prices (because they can respond by buying more when prices happen to be low – and possibly engage in arbitrage through inventories); similarly, society favours prices that reflect (changes in) costs (the “ideal prices” reflect marginal costs).

generate more variable retail prices and are thus less likely to facilitate such collusion. For example, quantity quotas, such as quantity floors or ceilings, contribute to increase the variability of retail prices when there are local shocks on consumers' demand. Similarly, granting exclusive territories reduces intrabrand competition and tends to give retailers more freedom in their pricing policies. While two-part tariffs may allow manufacturers to recover retail profits and avoid double marginalisation, exclusive territories still increase the variability of retail prices in the presence of local shocks on demand. While their impact on price responses to shocks on retail costs is more ambiguous, they still cannot eliminate price variability in that case.

This facilitating practice argument thus tends to single out price restrictions. When the lack of market transparency about rivals' prices is the primary obstacle to cartel stability, RPM and related price restrictions can facilitate collusion by making retail prices more uniform, which in turn makes detections easier to detect and thus to punish. In contrast, non-price restraints either exacerbate price fluctuations or provide less effective means to reduce it; the facilitating practice argument thus either does not apply, or applies to a lesser degree. This clear distinction between the impact of price and non-price vertical restraints provides a potential basis for a tougher anti-trust treatment of price restrictions, and particularly of RPM.

5.4 Interlocking Relationships

The literature reviewed so far either studies (i) vertical coordination problems between upstream (manufacturers, say) and downstream (wholesalers or retailers, say) partners, within a given vertical structure, or (ii) the impact of vertical structure on the strategic interaction between rival, otherwise independent vertical structures – in which each retailer thus carries the products of a single manufacturer. Yet, in the case of consumer goods many retailers do

carry competing products; the situation is thus one of “interlocking relationships”, in which competing manufacturers distribute their products through the same, competing retailers. As we will now see, this has quite significant implications for the analysis of the role and impact of price restraints.

It is well-known in the literature that rival manufacturers can use a common retailer as a “coordinating” device so maintain prices and profits.¹⁹ In Rey and Vergé (2008), we analyse the case where rival manufacturers deal with not one, but several common retailers, who are competing among themselves in the downstream market. We show that, while interbrand competition among upstream manufacturers and intrabrand competition among downstream retailers would together yield a somewhat competitive outcome in the absence of any price maintenance restraint, allowing RPM provisions instead allows the firms to avoid interbrand as well as intrabrand competition and maintain monopoly prices and profits. We illustrate our analysis with recent empirical studies of the French case, where the institutional environment has de facto allowed firms to circumvent the illegality of RPM provisions.

5.4.1 Competition in the Absence of RPM

Assuming that manufacturers compete in non-linear (two-part) tariffs (so as to avoid double marginalisation problems),²⁰ the overall

¹⁹ Bernheim and Whinston (1985, 1986) make this point in a context where many potential retailers compete to be selected as the common agent, while O’Brien and Shaffer (1997) and Bernheim and Whinston (1998) consider the case of a bottleneck retailer. In all cases, absent any additional contracting externalities, simple two-part tariffs, in which manufacturers sell at cost and recover their shares of the profits through fixed fees, suffice to align the interests of the various parties and generate monopoly prices and profits.

²⁰ See Dobson and Waterson (2007) for an analysis of the situation where upstream suppliers compete in linear tariffs.

outcome is somewhat competitive. Interestingly, this is not entirely obvious in the case of interlocking relationships, since retailers act as “common agents” for both manufacturers.

To see this, consider a reduction in the retail price of a manufacturer’s products. As usual, the manufacturer will feel the impact of such a price change on its profits, through its upstream margin. But in addition, the impact on retail profits will also be reflected in the fixed fees that the manufacturer can charge to retailers. As a result, the manufacturer will fully internalize the overall impact of the price change on the full (upstream plus downstream) margin for its products, but it will also internalize the impact of the price change on the retail margins on rival products. Hence, its incentives to induce such a price change will be quite different from the case of “independent” rival structures, where the latter effect does not arise.

Suppose for example that two manufacturers, A and B, distribute their products through two retailers, 1 and 2, and consider an expansion in the sales of brand A at retailer 1’s store, at the expense of the sales of brand B at the same store, as well as of the sales of both brands at retailer 2’s store. To fix ideas, suppose that upstream margins are 6 € per unit (that is, wholesale prices exceed manufacturers’ variable costs by 6 €) while downstream margins are 4 € per unit (that is, retailers’ prices exceed their own variable costs – including wholesale prices – by 4 €), and that the sales of brand A at store 1 increase by 100 units, at the expense of a decrease of 40 units in the sales of brand B at store 1 as well as in the sales of brand A at store 2, and of a (smaller) reduction of 20 units in the sales of brand B at store 2. Assuming that margins remain unchanged,²¹ the net impact of overall profits would be zero, since the industry gain from the expansion in the sales of brand A at store 1, equal to

$$\left(\underbrace{6}_{\text{upstream margin}} + \underbrace{4}_{\text{downstream margin}} \right) \times \underbrace{100}_{\text{increase in the sales of A at 1}} = 1000,$$

²¹ That is, neglecting the small cut in the price of brand A at store 1 that could trigger the expansion in sales.

would be exactly compensated by the total loss of profits from the reduction in the other sales, equal to

$$\left(\underbrace{6}_{\text{upstream margin}} + \underbrace{4}_{\text{downstream margin}} \right) \times \left(\underbrace{40}_{\text{decrease in the sales of B at 1}} + \underbrace{40}_{\text{decrease in the sales of A at 2}} + \underbrace{20}_{\text{decrease in the sales of B at 2}} \right) = 1000.$$

Therefore, from the industry perspective, such a change would not be profitable.

Consider now the impact on manufacturer A's profit. Through its upstream margin, manufacturer A already internalizes some impact of the sales of its own brand and earns a net gain of

$$\underbrace{6}_{\text{upstream margin}} \times \left(\underbrace{100}_{\text{increase in the sales of A at 1}} - \underbrace{40}_{\text{decrease in the sales of A at 2}} \right) = 360.$$

In addition, by adjusting the amount of the fixed fee it charges to retailer 1, manufacturer A can appropriate the positive impact on retailer 1's variable profit, equal to

$$\underbrace{4}_{\text{downstream margin}} \times \left(\underbrace{100}_{\text{increase in the sales of A at 1}} - \underbrace{40}_{\text{decrease in the sales of B at 1}} \right) = 240.$$

However, manufacturer A will also have to adjust the fixed fee charged to retailer 2, so as to compensate it for the loss in its variable profit, equal to

$$\underbrace{4}_{\text{upstream margin}} \times \left(\underbrace{40}_{\text{decrease in the sales of B at 1}} + \underbrace{20}_{\text{decrease in the sales of B at 2}} \right) = 240.$$

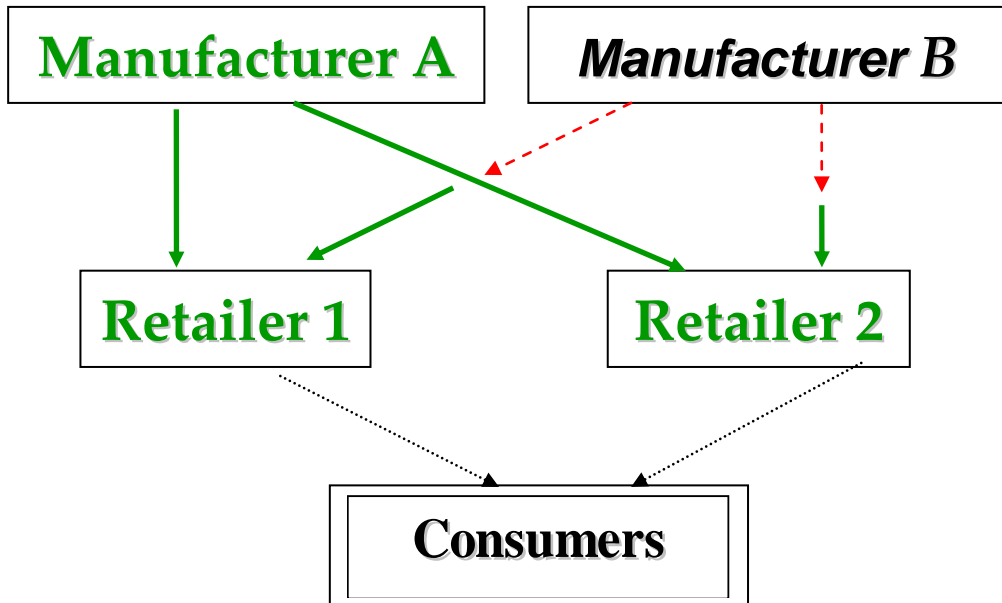
Taking into account all these effects, manufacturer A still has an incentive to expand the sales of its brand, since this will generate a net gain of

$$360 + 240 - 240 = 360.$$

The reason is that, while manufacturer A takes into account the direct impact of such a change on its own profit (through its upstream margin) as well as on both retailers' profits (through the fixed fees it charges them), it will still ignore the loss of profit inflicted on the rival manufacturer, equal to

$$\underbrace{6}_{\text{upstream margin}} \times \left(\underbrace{40}_{\text{decrease in the sales of B at 1}} + \underbrace{20}_{\text{decrease in the sales of B at 2}} \right) = 360.$$

As manufacturers ignore the impact of an expansion of their sales on rival manufacturers' upstream margins, each has an incentive to maintain relatively lower wholesale prices (so as to induce lower retail prices for their brands) than what would be needed to maximise total industry profits, which yields an overall, somewhat competitive outcome. This is illustrated in the following figure, where the solid arrows represent the margins taken into consideration by manufacturer A: the full margin on the sales of its own brand at both retail stores, plus the retail margin on the sales of the rival brand at both stores; the dotted arrows reflect instead the margins ignored by manufacturer A, namely, its rival's upstream margin on the sales of brand B at both stores.



The essential difference here with the “common agency” situations analyzed for example by Bernheim and Whinston is the existence of competition at both upstream and downstream levels. Using the same retailers as “common agents” could eliminate interbrand competition, but this would require squeezing upstream margins, in which case intrabrand competition would drive final prices to a competitive level. Conversely, compensating the pressure from intrabrand competition requires manufacturers to charge wholesale prices above costs, which in turn induces them to account only partially (through the retail margins, thus ignoring upstream margins) for the impact of their pricing decisions on rivals' products; as a result, they have an incentive to “free-ride” on rival's upstream margins, which eventually leads to prices below the monopoly level

5.4.2 Monopolisation through RPM

If instead RPM clauses are allowed, firms no longer need to rely on wholesale prices to maintain high retail prices. In addition, they are now free to use two different ways of sharing the profits: through the fixed fees, as before, or through the wholesale prices.²² However, deciding to share the profits through fixed fees or through wholesale prices has an impact on manufacturers' incentive to undercut each other. As just noted, this incentive is driven by the size of rivals' upstream margins: therefore, the lower these margins (i.e., the more manufacturers obtain their shares of profit through fixed fees rather than wholesale prices), the less they have an incentive to undercut each other.

It follows from these observations that there can exist many equilibria (depending on how the profits are shared, wholesale margins or fixed fees), including one in which retail prices are set at the monopoly level: charging wholesale prices reflecting manufacturing costs (thus squeezing upstream margins) eliminate the incentive to undercut each other and thus allows manufacturers to maintain monopoly prices and generate monopoly profits, which they can then share through fixed fees.

Indeed, if one manufacturer does this, it is in its rival's best interest to do the same. Consider for example the previous illustration, in which two manufacturers, A and B, distribute their goods through two retailers, 1 and 2, and suppose that manufacturer B reduces its wholesale price down to cost, while *maintaining* (through a RPM provision) *the same retail price* as before. This amounts to transfer manufacturer B's margin to the retailers: the margins on brand B are thus now equal to 0 € for the manufacturer and to $6 + 4 = 10$ € for each retailer. Consider now the impact on manufacturer A's profit of the same expansion of brand A at store 1

²² While they could already use wholesale prices to share profits, previously these prices had also an impact on retail ones, and thus on profits; this is no longer the case now, since retail prices are directly set through RPM.

(+100 units), at the expense of brand B at the same store (-40 units), as well as of both brands at store 2 (-40 units for A and -20 units for B). Assuming for the moment that manufacturer A sticks to the same prices as before, through its upstream margin of 6 €, it still earns a net gain of

$$\underbrace{6}_{\text{upstream margin}} \times \left(\underbrace{100}_{\text{increase in the sales of A at 1}} - \underbrace{40}_{\text{decrease in the sales of A at 2}} \right) = 360.$$

When setting the fixed fee it charges to retailer 1, manufacturer A again takes into account that retailer's gain on the expanded sales of its own brand, as well as the loss resulting from the reduced sales of the rival product. However, since the retailer now obtains the full margin on B's product, the net effect on the fixed fee is lower than before and actually becomes here zero:

$$\underbrace{4}_{\text{downstream margin on A}} \times \underbrace{100}_{\text{increase in the sales of A at 1}} - \underbrace{10}_{\text{downstream margin on B}} \times \underbrace{40}_{\text{decrease in the sales of B at 1}} = 0.$$

Similarly, in order to compensate retailer 2 for the loss of sales (in both brands) at its store, manufacturer A will now have to lower the fee even more than before, due to the higher retail margin on brand B: the fee must now be lowered by

$$\underbrace{4}_{\text{upstream margin on A}} \times \underbrace{40}_{\text{decrease in the sales of A at 2}} + \underbrace{10}_{\text{upstream margin on B}} \times \underbrace{20}_{\text{decrease in the sales of B at 2}} = 360.$$

Summing-up these effects, the net impact on manufacturer A's profit reflects the total impact on the industry profit,²³ which is here

²³ The impact on retailer 1's fixed fee need not be zero; it could be positive or negative, depending on the relative sizes of the retailer's margins on the two brands, and on the changes in volumes. What is robust, however, is that the sum of this impact and of the needed reduction in retailer 2's fixed fee aligns manufacturer A's self interest with the industry profit.

equal to zero. The reason is that manufacturer A now fully internalizes the impact of a change in the sales of both products:

- As before, it directly takes into account the impact of the sales of its brand on its own upstream margin and, when setting the fixed fees, it also takes into account the impact of these sales on retailers' margins; it therefore internalizes the impact of these sales on the total (upstream + downstream) margin.

- Through the fixed fees, it moreover internalizes the impact of a change in the rivals' sales on retailers' margins; but since these margins now represent the total margin (manufacturer B's margins having been squeezed), manufacturer A therefore fully internalizes the impact of these changes on all margins and is thus led to maximize total, industry-wide profits (that is, the dotted arrows disappear in the previous figure, and thus solid arrows coincide with total margins for all brands at all stores).

Rey and Vergé (2008) analyse this type of situation in more detail and consider two variants, depending on the existence of retail bottlenecks. When there is a supply or potential retailers at each retail location, in the absence of RPM the equilibrium outcome is indeed somewhat competitive; in contrast, allowing RPM generates multiple equilibria, including one in which retail prices are at the monopoly level. This equilibrium is the best for the firms (at the expense of consumers and society, who would favour lower prices) and moreover remains the unique equilibrium when providing retail efforts and services is taken into consideration. The analysis is a bit trickier when instead established retailers control access to consumers, as manufacturers may then be tempted to exclude their rivals from some of these bottlenecks. As a result, it may be the case that no equilibrium exists in which all brands are carried by all stores. Yet, with RPM, there exists again a wide range of situations with multiple equilibria, including one in which all brands are sold in all stores at monopoly prices. Thus, in the context of interlocking relationships in which competing manufacturers distribute their goods through the same, competing retailers, RPM allows the firms to defeat both interbrand and intrabrand competition.

5.4.3 Empirical Studies

The above analysis can be illustrated by the evolution of competition in French markets for consumer goods. While in principle price floors are banished in France, in 1996 a bill was adopted that opened the possibility of enforcing them. The objective of the bill was to prevent resale at a loss, but was construed in such a way that, by relying on rebates and other types of transfers that do not appear on delivery invoices, manufacturers could *de facto* impose price floors. This possibility was indeed widely exploited by the manufacturers of branded products and large retailers, and it generated in the following years a significant increase in the prices of branded products in supermarkets, as can be seen for example by comparing the evolutions of prices in France with that of other European countries.²⁴ Two empirical studies suggest that the generalized adoption of RPM indeed allowed the firms to defeat interbrand as well as intrabrand competition.

First, Biscourp, Boutin and Vergé (2008) study the correlation between retail prices and the concentration of local retail markets, using data on retail prices of food products in French retail chains during the period 1994-1999; they find that the correlation was important before the reform, but no longer significant after its adoption. This suggests that, while competition was at work before the reform, ensuring that less concentration resulted into lower prices, it was no longer present after the reform.

Second, Bonnet and Dubois (2004, 2007) use a structural econometric model based on micro-level data to study the French market of bottled water during the 1998-2001 period. Their approach builds on Villas-Boas (2007), who extends the empirical method developed by Berry, Levinsohn and Pakes (1995) to multiple stages of competition (upstream competition among manufacturers and

²⁴ For a detailed analysis, including testimonies and international comparisons, see for example Canivet (2004).

downstream competition among retailers).²⁵ They estimate different possible situations, depending on whether manufacturers offer linear or two-part tariffs, and with RPM or not. They conclude that the most likely situation is the one where manufacturers combine two-part tariffs with RPM in order to maintain monopoly prices. This supports the interpretation of the 1996 bill as legalizing RPM, as well as our analysis of its impact on prices and profits. Their approach also allows them to simulate the impact of an effective ban on RPM, and they find that retail prices would decrease by about 7% on average.

Overall, these recent theoretical and empirical works thus suggest a cautious attitude towards price restrictions in situations where rival manufacturers rely on the same (competing) retailers.

5.5 Concluding Remarks: Policy Implications

This brief overview of the economic literature first stresses a tension between the economic literature and the relatively tougher treatment towards price restrictions observed in practice. Indeed, most of the economic literature has so far focused on two types of issues:

Vertical coordination: the general message there is that both price and non-price restrictions can help vertically related firms to internalize the impact of their decisions on their partners – taking as a given the behaviour of rival (supposedly independent) vertical structures. While the general policy implication for vertical restraints is not always clear-cut (what is good for the firms may be good for consumers and society, particularly in case of free-riding or intense interbrand competition, but not necessarily so), it does not appear to provide a strong basis for differentiating the treatment of different

²⁵ The general idea is to use data on equilibrium prices and quantities to estimate cost as well as demand parameters. In the case of multiple stages, the cost parameters at a given level provide information about the input prices charged at the level above, which extends the insight.

types of restraints. First, identifying those instances where the interest of the firms may be conflicting with that of consumers or society is a difficult task; intervention might thus frequently result in socially costly mistakes, and minimizing this risk would also require socially costly efforts. Second, and more to the point for our analysis, this line of argument does not help distinguish price from non-price restrictions, as both types often provide effective ways of enhancing vertical coordination – irrespective of whether this is good or bad for consumers or society.

Interbrand rivalry: Competition-dampening effects point at ways in which vertical restraints can soften the intensity of competition between rival vertical structures, while foreclosure arguments are more concerned with their potential use to weaken a rival. Interestingly, however, these arguments seem to apply more adequately to non-price restrictions such as exclusive territories (which, by giving retailers more flexibility in their pricing decisions, can serve as a commitment device to dampen interbrand competition) or exclusive dealing (for exclusionary purposes).

Three additional types of arguments need however to be taken in account:

Downstream cartel: Price restrictions constitute a handy way to cartelize an industry through “sham vertical agreements”. This is quite clear and has therefore not triggered much theoretical work; and since price floors used to be treated quite harshly (per se illegality or hard-core restriction), there is relatively little evidence of such instances. Yet, this might constitute a serious concern in practice if the legal status was to be changed (a more detailed analysis of the comparative advantage of price and non-price restrictions in maintaining downstream cartels may however be useful there).

Upstream collusion: In Jullien and Rey (2007), we revisited the old concern that RPM could facilitate collusion among manufacturers. We find that, through RPM, manufacturers can impose more uniform retail prices, which despite introducing an inefficient rigidity, makes indeed markets more transparent and thus facilitates

a collusive behaviour. Price restrictions moreover appear to constitute a better facilitating instrument, compared with pure intrabrand competition or provisions such as quantity quotas and territorial protection clauses.

Interlocking relationships: Finally, in Rey and Vergé (2008), we stress the potentially adverse role of price restrictions such as RPM in the case of “interlocking relationships”, that is, when competing manufacturers distribute their goods through the same, competing retailers. In such a case, we find that, by eliminating intrabrand competition, RPM allows rival manufacturers to use retailers as “common agents” and avoid interbrand competition as well. This finding is moreover in line with the conclusions of recent empirical studies of the French market, where a bill introduced in 1996 paved the way for a generalised use of resale price maintenance.

The “sham agreement” concern and the recent works thus militate for some caution towards price restrictions. They also suggest some dividing lines. For example, price restrictions are more likely to be socially desirable when they are adopted by a new manufacturer trying to enter a market, or when rival, independent vertical structures intensely compete against each other. In contrast, price restrictions are potentially more harmful when: (i) (downstream) firms enter into (sham) agreements with the same vertical partner, (ii) price restrictions are widely adopted by rival structures in an industry where collusion is a concern, and (iii) in the case of interlocking relationships, where rival manufacturers distribute their products through the same retailers.

References

- Aghion, P. and Bolton, P. (1987), "Contracts as a Barrier to Entry", *American Economic Review* 77, 388--401.
- Bernheim, D. and Whinston, M. (1985), "Common Marketing Agency as a Device for Facilitating Collusion", *Rand Journal of Economics* 16, 269-281.
- Bernheim, D. and Whinston, M. (1986), "Common Agency", *Econometrica* 54, 923-942.
- Bernheim, D. and Whinston, M. (1998), "Exclusive Dealing", *Journal of Political Economy* 106, 64-103.
- Berry, S., Levinsohn, J. and Ariel Pakes (1995), "Automobile Prices in Market Equilibrium", *Econometrica* 63(4), 841-890.
- Biscourp, P., Boutin, X. and Vergé, T. (2008), "The Effects of Retail Regulations on Prices: Evidence from the Loi Galland", INSEE-DESE Discussion Paper G2008/02.
- Bonanno, G. and Vickers, J. (1988), "Vertical Separation," *Journal of Industrial Economics* 36, 257-65.
- Bonnet, C. and Dubois, P. (2004), "Inference on Vertical Contracts between Manufacturers and Retailers Allowing for Non Linear Pricing and Resale Price Maintenance", mimeo.
- Bonnet, C. and Dubois P. (2007), "Non Linear Contracting and Endogenous Buyer Power between Manufacturers and Retailers: Identification and Estimation on Differentiated Products", mimeo.
- Bork, R. (1978), *Antitrust Paradox*, New York: Basic Books.

- Caillaud, B. and Rey, P. (1987), "A Note on Vertical Restraints with the Provision of Distribution Services", Mimeo, INSEE and M.I.T. Discussion papers.
- Caillaud, B. and Rey P. (1995), "Strategic Aspects of Vertical Delegation," *European Economic Review* 39, 421-431.
- Canivet, G. (2004), "Restauration la concurrence par les prix - Les produits de grande consommation et les relations entre industrie et commerce", report supervised by, Documentation française, Paris.
- Comanor, W. (1985), "Vertical Price Fixing and Market Restrictions and the New Antitrust Policy", *Harvard Law Review*, Vol. 98, pp. 983-1002.
- Dobson, P. and Waterson, M. (2007), "The Competition Effects of Industry-Wide Vertical Price Fixing in Bilateral Oligopoly," *International Journal of Industrial Organization* 25, 935-62.
- Gal-Or, E. (1991), "Duoplistic Vertical Restraints", *European Economic Review* 35, 1237-1253.
- Hart, O. and Tirole, J. (1990), "Vertical Integration and Market Foreclosure," *Brookings Papers on Economic Activity* (Microeconomics Issue), 205-86.
- Jullien, B. and Rey, P. (2007), "Resale Price Maintenance and Collusion," *Rand Journal of Economics* 38, 983-1001.
- Marvel, H. and McCafferty, S. (1984), "Resale Price Maintenance and Quality Certification," *Rand Journal of Economics* 15, 346-59.

- Mathewson, G. and Winter, R. (1998), "The Law and Economics of Resale Price Maintenance," *Review of Industrial Organization*, 13, 57-84.
- McAfee, R. and Schwartz, M. (1994), "Opportunism in Multilateral Vertical Contracting: Nondiscrimination, Exclusivity, and Uniformity," *American Economic Review* 84, 210-30.
- McGuire, T.W., and Staelin, R. (1983), "An Industry Equilibrium Analysis of Downstream Vertical Integration", *Marketing Science* 2, 161-191.
- O'Brien, D. and Shaffer, G. (1992), "Vertical Control with Bilateral Contracts," *Rand Journal of Economics* 23, 299-308.
- O'Brien, D. and Shaffer, G. (1997), "Non-Linear Supply Contracts, Exclusive Dealing, and Equilibrium Market Foreclosure", *Journal of Economics and Management Strategy*, 6, 755-785.
- Posner, R. (1976), *Antitrust Law*, Chicago: University of Chicago Press.
- Rasmusen, E. B., Ramseyer, J. M. and Wiley, J. S. (1991), "Naked Exclusion", *American Economic Review* 81: 1137-1145.
- Rey, P. and Stiglitz, J. (1988), "Vertical Restraints and Producers Competition", *European Economic Review* 32, 561-568.
- Rey, P. and Stiglitz, J. (1995), "The Role of Exclusive Territories in Producers Competition," *Rand Journal of Economics* 26, 431-451.
- Rey, P. and Tirole, J. (1986), "The Logic of Vertical Restraints," *American Economic Review* 76, 921-39.

- Rey, P. and Tirole, J. (2007), "A Primer on Foreclosure," In *Handbook of Industrial Organization*, vol. 3, Elsevier, Amsterdam, pp. 2145-2220.
- Rey, P. and Vergé, T. (2004), "Bilateral Control with Vertical Contracts," *Rand Journal of Economics* 35, 728-46.
- Rey, P. and Vergé, T. (2007), "The Economics of Vertical Restraints", *Handbook of Antitrust Economics*, Paolo Buccirossi ed., MIT Press.
- Rey, P. and Vergé, T. (2008), "Resale Price Maintenance and Interlocking Relationships", Toulouse School of Economics, mimeo.
- Scherer, F.M. (1983), "The Economics of Vertical Restraints", *Antitrust Law Journal* 52, 687-707.
- Shaffer, G. (1991), "Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices," *Rand Journal of Economics* 22, 120-135.
- Slade, M.E. (1998) "Beer and the Tie: Did Divestiture of Brewer-Owned Public Houses Lead to Higher Beer Prices?" *Economic Journal*, 108: 1-38.
- Spence, M. (1975), "Monopoly, Quality, and Regulation, *The Bell Journal of Economics*, 6, 417-29.
- Spengler, J. (1950), "Vertical Integration and Antitrust Policy," *Journal of Political Economy* 53, 347-52.
- Telser, L (1960), "Why Should Manufacturers Want Fair Trade?" *Journal of Law and Economics* 3, 86-105.

- Vickers, J. (1985), "Delegation and the Theory of the Firm", *The Economic Journal*, Economic International Conference Supplement, Vol 95, pp 138-147.
- Villas-Boas, S. (2007), "Vertical Relationships Between Manufacturers and Retailers: Inference with Limited Data," *Review of Economics Studies* 74, 625-52.
- Whinston, M. D. (1990), "Tying, Foreclosure, and Exclusion", *American Economic Review* 80, 837--860.
- White, L. (2007), "Foreclosure with Incomplete Information", *Journal of Economics & Management Strategy* 16(2), 635-682.

6 **Is Nothing Sacred? Resale Price Maintenance and the EU Policy Review on Vertical Restraints**

Joanna Goyder

6.1 **Introduction**

Resale price maintenance¹ and in particular the question whether it should always, or only in certain circumstances, be legally prohibited is extremely topical, and has recently become the subject of much debate, both in the US and increasingly now in Europe.² This is principally for two separate reasons, one from each side of the Atlantic.

The question of how competition law should deal with RPM might have been raised in Europe in any case as the May 2010 expiry of the European Commission's vertical restraints block exemption regulation³ drew near, and consultation took place as to the renewal

¹ 'Resale price maintenance' (RPM) can refer to the imposition of a specific price, or either a maximum or minimum price, but does not normally include genuinely non-binding price recommendations. Fixed and minimum RPM are generally regarded as more likely to have anti-competitive effects than maximum RPM. Where it is relevant I will specify the type of RPM being referred to.

² For example, it was a prominent topic in the conference 'Vertical Restraints in Comparative Competition Law' held in Paris on 23 May 2008, and on 12 September 2008 the Austrian Competition Authority held a conference in Vienna devoted entirely to RPM, <http://www.bwb-conference.at/>. See also some recent articles listed in the References.

³ Commission Regulation 2790/1999 on the application of Art. 81(3) of the Treaty to categories of vertical agreements and concerted practices [1999] OJ L336/21.

and amendment both of the regulation itself and the accompanying guidelines.⁴ This regulation, discussed further below, provides a competition law 'safe harbour' for certain distribution agreements, but notably excludes from its scope any agreement featuring fixed or minimum RPM.

However, the issue has been brought to earlier and greater prominence than it otherwise would have had, by the June 2007 United States Supreme Court case of *Leegin*, described below, in which a challenge was successfully brought against the long-standing rule of United States (US) law that minimum RPM was a *per se* infringement of US antitrust law, and therefore prohibited in all circumstances. This has of course stimulated much debate as to whether and how that judgment, discussed below, should influence European Union (EU) competition law and policy.

One of the main considerations that will govern the outcome of the EU review is of course the question of what are the economic benefits and disadvantages of vertical restraints in general, and RPM in particular. However, I will not set out here the arguments for and against the welfare benefits of RPM. Not only is this the subject of several other contributions today and much other writing⁵, but this work is better done by economists than by a lawyer. In the following discussion I will instead proceed on the assumption that, though sometimes damaging, RPM can in some circumstances have beneficial effects. This appears to be the general consensus, and indeed was not in dispute between the parties in *Leegin*.

My contribution will focus rather on what are the other factors that need to be taken into account in deciding how economic understanding and knowledge about RPM might translate into EU competition law, and what can be predicted on the basis of past experience about the outcome of the review. I will set out some of the relevant background to and constraining and influencing factors in

⁴ Commission Guidelines on vertical restraints [2000] OJ C291/1.

⁵ A few recent articles are listed at the end of this text, and these themselves make reference to more of the wealth of literature available on this topic.

the current review, to show how the review needs to be guided not only by knowledge about the 'pros and cons of vertical restraints' from an economics point of view, but to be combined with these other considerations. To do this it is necessary to be aware of the legal, political, cultural and other factors that come into play in the formation of competition policy in this area.

I will first set out some preliminary considerations relating to the different functions of law and economics in this area, and the constraints under which legal policy-makers, in contrast to economists, work. I will then describe recent developments in US law, centred around a new and more generous approach to RPM, that have relevance for the European debate. Then comes a summary of European Community law on RPM, including its historical backdrop and the situation today, followed by discussion of the various mechanisms available for introducing policy change in the EU, were change to be considered desirable. I will also consider recent attempts to reform Article 82 enforcement policy, to see whether that experience has lessons in the context of RPM. Finally I will look at two other potentially influential factors, namely the legal principle of *stare decisis* and the drive towards international convergence.

6.2 Law versus Economics

It is now uncontroversial that economics should in principle inform both the setting of the general competition law rules, and their application in individual cases. The more difficult question is how exactly an understanding of economics should best be applied to produce workable legal rules.

Law serves a very different purpose from economics and they are disciplines that approach issues in fundamentally different ways. Though it is fashionable today to assert that they are, in the context of competition policy, but two sides of the same coin, the reality is that they do not always mesh well.

The function of competition law is first and foremost to inform those subject to it what they may and may not do. For this reason it is imperative that its rules be as clear and easy to apply as is reasonably possible. This is particularly so where failure to comply with the rules can have serious consequences, for example in terms of financial sanctions and nullity of contractual arrangements. Unless the law provides a sufficiently clear framework for companies to conduct their business it does not serve its function, and risks unfair treatment as between different companies. It may also have a paralysing effect on business, making companies uncertain as to what commercial strategies they may safely pursue.

Competition economics on the other hand serves essentially to explain the working of markets, whether to assess what has happened in the past or to predict what may happen in the future. It is untroubled by large numbers of variables or unknown facts, as these can be dealt with by postulating certain assumptions.

It is indisputable that competition law rules should be informed by economics. In some areas, such as the control of large-scale mergers, it may be inevitable that the rules are expressed in the kind of general terms that require significant economic analysis to be carried out in applying that law to individual cases. However, in other areas, such as RPM, some would argue that economics should perhaps inform the formulation of rules, but should not necessarily be called in to decide each individual case, given the considerable resource that this would demand.⁶

As observed by Breyer J. in his dissenting judgment in *Leegin*, the law, unlike economics, has to be an administrable system. He referred to the fact that RPM can sometimes be harmful and

⁶ In the context of US law Breyer J., dissenting, in *Leegin*, discussed below, drew such a distinction, saying 'And resale price maintenance cases, unlike a major merger or monopoly case, are likely to prove numerous and involve only private parties. One cannot fairly expect judges and juries in such cases to apply complex economic criteria without making a considerable number of mistakes, which themselves may impose serious costs'.

sometimes beneficial, and then expressed the lawyer's concern as follows: 'But before concluding that courts should consequently apply a rule of reason, I would ask such questions as, how often are harms or benefits likely to occur? How easy is it to separate the beneficial sheep from the antitrust goats?' He went on to say 'Economic discussion...can *help* provide answers to these questions, and in doing so, economics can, and should, inform antitrust law. But antitrust law cannot, and should not, precisely replicate economists' (sometimes conflicting) views. That is because law, unlike economics, is an administrative system the effects of which depend upon the content of rules and precedents only as they are applied by judges and juries in courts and by lawyers advising their clients. And that means that courts will often bring their own administrative judgment to bear, sometimes applying rules of *per se* unlawfulness to business practices even when those practices sometimes produce benefits'.

Breyer J. did not think it practicable to apply a rule of reason (meaning an economic analysis in each individual case enabling the weighing up of the pro- and anti-competitive effects of the agreement) to RPM. He asked 'How easily can courts identify instances in which the benefits are likely to outweigh potential harms? My own answer is, *not very easily*' and he predicted that such an approach would lead to 'lengthy time-consuming argument among competing experts, as they seek to apply abstract, highly technical, criteria to often ill-defined markets'.

All this points to the necessity of economics being a tool in the law-making process, rather than its prime driver. European Competition Commissioner Neelie Kroes expressed just such a guarded acceptance of the usefulness of economics, even in the context of cases on abuse of market dominance, when she said recently that 'an effects based analysis will not always require technical economic reasoning and evidence. Econometrics, for example, is a useful servant, but a terrible master'.⁷

⁷ Fordham University Symposium, New York, 25 September 2008.

Before going further, some explanation of my chosen title is called for. Today it is politically correct for competition lawyers to claim that they are fully comfortable with applying economic analysis in their cases. Indeed, it is increasingly the case that they have some background or training in economics, and that they frequently work in close cooperation with economists. Nevertheless, there lurks in many a competition lawyer an unreconstructed legal formalist, who places higher importance on the existence of clear rules that are practical to apply than on economic integrity. This is unsurprising, as lawyers are in the business of advising companies on what they can and cannot do, and so tend to seek structure and clear rules.⁸ For them, the news that US law, as will be explained below, no longer treats RPM as always prohibited, felt like the removal of one of the few clearly articulated certainties offered by competition law.

So, by the title of this contribution, I do not mean at all to say that current EU policy on RPM is so clearly correct that it should be untouchable. Rather, I intend it to reflect the importance that lawyers, in comparison with economists, attribute to maintaining a significant degree of certainty and stability in the law. It is also meant to express the broader idea that a review of the law on RPM involves a wide span of practical and cultural, not to mention legal, factors, and so is a much more complex process than simply

⁸ Perhaps it is significant in this context that businesses do not normally call in economic consultants to advise them on developing their distribution strategies, presumably because they do not expect economists to be able to give them firm advice on which strategy will result in the most profitable outcome. When making decisions about commercial strategy, although business people may consciously or unconsciously take into account some economic learning in their decision-making, it does not take the form of formal economic analysis. If the economists are called in, it will normally be at the stage when it has become necessary, after the event, to provide an explanation to a regulator or court as to why the arrangements are pro-competitive, or at least not anti-competitive.

examining RPM's possible economic effects and writing these findings into the law.

6.3 The US Supreme Court Judgment in *Leegin*

Here is not the place to describe the, very interesting, history of US political, legislative and judicial attitudes to RPM.⁹ Suffice it to say that until June 2007 there was a long-established rule of US law, originally set out in the 1911 case *Dr. Miles*, that characterised minimum RPM as a *per se* infringement of Section 1 of the Sherman Act prohibition on all agreements and arrangements 'in restraint of trade or commerce'. In US law a clause characterised as a *per se* infringement is automatically illegal, whatever the surrounding circumstances.¹⁰

Then in June 2007 the US Supreme Court judgment in *Leegin*¹¹ overturned that rule, holding instead that the 'rule of reason' should be applied to such conduct, meaning that all the market circumstances of any particular arrangement should be analysed on an individual basis and its pro- and anti-competitive effects assessed in order to establish whether, on balance, it enhances or damages economic efficiency or competition.¹²

The case concerned retail distribution of leather goods and fashion accessories. *Leegin*, designer and manufacturer of the goods,

⁹ For this history, and a description of and comparative EU/US perspective on the *Leegin* case I particularly recommend Jones (2008).

¹⁰ In this respect, as is discussed further below, *US law on RPM pre-Leegin* was much more rigid than EU competition law is or ever has been.

¹¹ *Leegin Creative Leather products v PSKS Inc*, 551 US (2007).

¹² A full rule of reason analysis can be complex and time-consuming. This has led to courts sometimes, in cases where anti-competitive effects seem obvious, applying instead a 'truncated' or 'quick look' rule of reason, which reduces the burden of proof on the party seeking to establish an infringement.

distributed these through small boutiques and specialist shops, and made it known that outlets selling at below its recommended prices would no longer be supplied. A retailer who was refused supplies as a result of this policy claimed damages from Leegin, and the judge at the hearing refused to consider evidence from Leegin of the pro-competitive justifications for its policy, on the basis that the policy was a *per se* infringement and so legally incapable of justification. The judgment was appealed, and the issue of whether minimum RPM should continue to be treated as a *per se* infringement finally came before the Supreme Court. The Court had the benefit of a large number of erudite submissions, including 25 from economists, and *amicus* briefs from the Federal Trade Commission (FTC) and the Department of Justice, in support of Leegin, and a number of others, including those of 37 state Attorneys General, arguing for the retention of the *per se* prohibition. Leegin prevailed, but the result, like the debate that preceded it, was controversial, with the judges being split 5-4.

The majority held that, given that a *per se* rule should only apply to a restraint that 'always or almost always' restricts competition, and that economics provides plenty of pro-competitive justifications for RPM, a *per se* prohibition was not appropriate for RPM. Nevertheless they accepted that 'courts would have to be diligent' in preventing its anti-competitive use, and suggested that relevant factors that courts should look at would include the number of manufacturers in the market applying RPM, the source of the practice (RPM initiated by retailers being more likely to indicate retailer collusion), and the market power held by either the manufacturer or the retailers.

The dissenting judges accepted that RPM could have pro- or anti-competitive effects, but differed from the majority as to how often each occurred, and how easy it would be for judges to make a 'rule of reason' assessment. The dissent was also based in large part on the US law principle of *stare decisis*, discussed below, which generally requires courts to follow their previous rulings.

In order to assess the relevance of this development for the European debate, it is important to understand something of the context in which it occurred. Firstly, over the years, the rule originally set out in *Dr Miles* had been restricted in a number of ways, providing various escape routes for manufacturers wanting to control resale prices. For example, the so-called ‘*Colgate doctrine*’ allowed for ‘unilateral’ RPM, whereby distributors made clear their desired pricing policy and refused to supply resellers that did not abide by it. This resulted in arbitrary discrimination dependent on the formalistic question of whether the distributors could be said to have ‘agreed’ to the policy.¹³ Similarly, it was held that an agreement between manufacturer and retailer that the manufacturer would terminate price-cutting retailers, without actual agreement on pricing, was not subject to *per se* prohibition, and there are many other such examples. However, the effect on competition does not depend on whether or not the restriction is unilateral or indirect, so given the complexity of the resulting rules, *Leegin* can be seen as a development which not so much radically changes the law, but simplifies it and renders it more coherent.

Secondly, this judgment can also be seen (Jones 2008, Kolasky, 2008) as part of a preference for reducing the scope of antitrust rules generally, in the light of the criminal sanctions, including imprisonment, available in the US, and the fact that treble damages may be awarded to plaintiffs in such cases.

Thirdly, and perhaps most importantly, the *Leegin* judgment generated immense controversy at the time, and remains unpopular in many quarters. More than one year on it remains very unclear what its eventual impact will be, and proposed legislation to reinstate the *per se* prohibition on RPM is currently before Congress.

¹³ A similar distinction might appear to exist in EU law as a result of the express requirement of an ‘agreement’ in Article 81(1) of the EC Treaty. However, in EU law the concept of ‘agreement’ is interpreted broadly and purposively, meaning that only truly unilateral conduct escapes this provision; see Case C-195/91P *Bayer v Commission* [1994] ECR I-5619.

Carney and McAhren (2008), writing a year after *Leegin*, report that '[a] dramatic change for minimum RPM agreements does not appear imminent' and that 'their use remains problematic'. They observe that so far federal courts have not had the opportunity to apply *Leegin* on the merits. They also point to an FTC order¹⁴ in which it modified, but kept in place, a 2000 consent decree concerning RPM and, placing significant weight on the concerns about anti-competitive effects expressed in the dissenting judgment in *Leegin*, applied a 'quick look' analysis, based on the three factors suggested in *Leegin*, rather than a full rule of reason analysis.

Adding to the uncertainty as to the ultimate legacy of *Leegin* is the fact that individual US states are not required to interpret their own antitrust laws in the same way as the Sherman Act. Carney and McAhren (2008) report that thirteen states have statutes expressly prohibiting RPM. Many state Attorneys General have made clear their continuing preference for *per se* prohibition of RPM, and 35 of them have written to Congress in support of federal legislation to this effect. A case which appears to illustrate their continuing hostility to RPM in practice is the *Herman Miller* action, brought by three states,¹⁵ which was settled, with the manufacturer being fined and agreeing not engage in consensual RPM.

It seems clear that what might first appear a radical break with previous law and practice is in fact a much more nuanced, and as yet not complete, development. The European Commission will certainly, and rightly, be cautious about what if any lessons it draws from *Leegin*.

¹⁴ *In re Nine West Group* (May 6, 2008).

¹⁵ *State of New York v. Herman Miller, Inc.*, (S.D.N.Y. May 25, 2008).

6.4 EU Law and Policy on Vertical Restraints

6.4.1 Background

EU policy on vertical restraints, including RPM, was born in the early years of the European Community, when the creation of a single European trading area was paramount, and any arrangements that threatened integration of national markets immediately came under scrutiny from the Commission. There are even examples of early competition law decisions that appear to give precedence to single market concerns over competition and consumer or social welfare considerations. RPM, which can clearly be instrumental in creating or maintaining national barriers to trade and segregating national markets, and in particular entrenching price differences between Member States, was therefore treated strictly from the start.

In addition the approach to vertical restraints generally was formalistic, focusing principally on the wording of restrictions rather than on their effects in the market. There was also a tendency towards setting different sets of rules for different market sectors, as seen particularly in the specific 'block exemption' rules for distribution agreements in the beer, petrol and motor vehicle sectors. Though users did appreciate the legal certainty that this approach provided, it was also frequently criticised for imposing a rigid 'strait-jacket' on business, meaning that businessmen would tend to model their distribution arrangements not primarily on the basis of what would be commercially most effective, but on the terms of the block exemptions. Also, because the block exemptions applied to all businesses, regardless of their market power, they did not focus attention on the types of agreement that were actually likely to be most harmful to competition or consumer welfare. In fact it was the trenchant criticism that this policy attracted in the 1990s that acted as a catalyst for review of policy on vertical restraints. That subsequently broadened out into a drive to apply more economic analysis in all areas of EU competition law enforcement.

Since those early days there has been considerable change in the rhetoric of EU competition policy in general, and also as regards vertical restraints specifically. The replacement in 2000 of a number of existing block exemptions relating to vertical restraints by the single vertical restraints block exemption Regulation 2790/1999 marked a turning point. It introduced an avowedly economics- and effects-based approach, with an attempt to focus on prohibiting distribution arrangements that are damaging to consumer welfare, and otherwise leaving parties relatively free to adopt the distribution policy that they judge most effective. However, both the regulation and its accompanying guidelines continued to treat RPM strictly. Furthermore, the single-market integration aim retains importance even now in competition law decisions.¹⁶

6.4.2 Current EU Law and Policy on RPM

The relevant EC Treaty provision is Article 81, which governs anti-competitive agreements. This sets out a general prohibition in Article 81(1) on ‘agreements between undertakings, decisions by associations of undertakings and concerted practices which have as their object or effect the prevention, restriction or distortion of competition within the common market and which may affect trade between Member States’. It then provides a non-exhaustive list of types of clause that are included in this provision, one of which is any that ‘directly or indirectly fix purchase or selling prices’. Restrictions with a restrictive ‘object’ are automatically prohibited, without need to consider their actual effects. While in the case of agreements with a restrictive ‘effect’ the ECJ has said that the surrounding economic circumstances are relevant to deciding whether there is a restriction of competition, it has also made it clear

¹⁶ This was most recently reiterated by the European Court of Justice (ECJ) in Joined Cases C-468/06 and others, ‘*Syfait II*’, 16 September 2008, not yet reported.

that Article 81(1) does not allow for a 'rule of reason' type of analysis.¹⁷ Article 81(2) renders void any arrangement that infringes Article 81(1).

Article 81(3) provides for exemption from this prohibition where four criteria, relating respectively to the benefits to production or distribution of goods or technical or economic progress, consumers receiving a fair share of these benefits, the agreement not being more restrictive than necessary, and there not being an elimination of competition, are satisfied. No agreement or clause is absolutely barred in law from benefiting from Article 81(3); it is always open to parties to demonstrate that their arrangements bring about sufficient economic advantages to justify their legality.¹⁸ Therefore Article 81(3), unlike Article 81(1), does effectively provide for a weighing of the economic advantages of a given restriction against its negative effects on competition, providing a kind of European 'rule of reason'.¹⁹

Article 81(1) has always been interpreted as automatically prohibiting the fixing of resale prices by agreement between a supplier and his purchaser. The ECJ has affirmed²⁰ that RPM has the object of restricting competition, and therefore proof of the fact of RPM necessarily implies an infringement of Article 81(1); while exemption under Article 81(3) is theoretically possible, it has never actually been granted, and fines are considered appropriate for RPM

¹⁷ Case T-112/99 *Métropole Télévision v Commission* [2001] ECR II-2459.

¹⁸ Case T-17/93 *Matra Hachette v Commission* [1994] ECR II-595. See also Case T-168/01 *GlaxoSmithKline v Commission* [2006] ECR II-2969.

¹⁹ For a detailed comparison of EU and US treatment of anti-competitive agreements see Jones (2006).

²⁰ In judgments such as Case 161/84 *Pronuptia* [1986] ECR 353 and Case 243/83 *Binon v AMP* [1985] ECR 2015. From the *Pronuptia* judgment it appears that only minimum prices are treated equally strictly as fixed prices, at least in the case of franchising. Maximum and recommended prices on the other hand should not necessarily infringe Article 81(1), provided that they do not in practice function as minimum or fixed prices.

infringements. While the ECJ in 1995 appeared to endorse the possibility of RPM being exempted under Article 81(3), at least in the special context of books, the judgment in question is not entirely clear.²¹

In practice therefore RPM has virtually always in practice been treated as a *per se* infringement of Article 81(1), but still with the possibility, in principle, of exemption under Article 81(3). Prior to 1 May 2004 and the 'modernisation' of EU competition law enforcement it could perhaps have been said that there was in some sense a *per se* prohibition, to the extent that, in the absence of an applicable block exemption, a formal Commission decision was needed to effect exemption. However, this can hardly be said to be the case post-modernisation, now that arrangements fulfilling the criteria for exemption are legal and enforceable without the need for any formality, as exemption applies automatically.

Guidelines published by the European Commission in 2000,²² avowedly based on economics-driven analysis that focuses on market effects, give guidance on both the interpretation of the vertical restraints block exemption regulation, discussed below, and the application of Article 81 to agreements that fall outside the block exemption. They make it clear that direct or indirect, fixed or minimum, RPM is a hard-core restriction of competition, that as such it is unlikely to be exempted under Article 81(3),²³ and that it tends to have the negative effects of reducing intra-brand competition and increasing price transparency.²⁴ The guidelines go on to set out the dangers of even maximum or recommended RPM.²⁵ Similarly, the Commission's Article 81(3) guidelines²⁶ make it clear that RPM

²¹ Case C-360/92 *Publishers' Association v Commission* [1995] ECR I-23.

²² See fn.4.

²³ Paras.46-48.

²⁴ Paras.111-112.

²⁵ Paras.225-228.

²⁶ [2004] OJ C101/97.

normally restricts competition,²⁷ they mention fixed and minimum RPM as examples of practices which have an anti-competitive 'object',²⁸ and nowhere is it suggested that RPM might satisfy the four Article 81(3) criteria.

Finally, also contributing to this sense of a *per se* prohibition is the Commission's notice on agreements of minor importance.²⁹ The ECJ has held that any restriction that has no appreciable effect on the competition is not within the scope of Article 81(1).³⁰ However, the Commission's notice, while stating that in general restrictions in vertical relationships where the market share of the parties does not exceed 15 per cent do not have an appreciable effect on competition and so do not infringe Article 81(1), expressly excludes RPM agreements from this 'safe harbour'.

Nonetheless, it is clear that EU law differs fundamentally from the national law of certain EU Member States, such as France, for example, where there is an absolute statutory prohibition of RPM backed up by penal sanctions, regardless of any surrounding market circumstances. It also differs from US law prior to *Leegin*, which did not provide any form of 'exemption' for RPM.

6.4.3 Block Exemption Regulations

In principle Article 81(3) applies to exempt all arrangements that satisfy its four conditions, and it is for the parties themselves to assess whether this is the case. However, for certain categories of agreement, including vertical restraints, there exist 'block exemption' regulations, which provide automatic exemption for arrangements satisfying certain criteria. The block exemption regulation on vertical

²⁷ Para.18.

²⁸ Para.23.

²⁹ [2001] OJ C368/13.

³⁰ Case 5/69 *Völk v Vervaecke* [1969] ECR 295.

restraints provides a safe harbour for all vertical agreements where the relevant market share does not exceed 30%, though there are certain 'black listed' restrictions, including fixed and minimum RPM (maximum and recommended prices are not black-listed), that take an agreement outside the scope of the block exemption. The existence of this and other block exemption regulations (including those applicable to motor vehicle distribution and technology transfer), all denying their benefit to agreements that include RPM, has also strengthened the impression, referred to above, of *per se* prohibition.

But to take from these block exemptions the message that RPM is not exemptable would be to misunderstand the nature and purpose of block exemptions. Such regulations are intended to identify types of agreements and clauses that can in defined circumstances be sufficiently safely assumed, without the need for individual examination, not to have a significant effect on competition. The fact that RPM clauses are not included within their scope only means that the Commission has taken the policy decision that such clauses should not be assumed legal without some investigation of their actual impact on the market. In other words, it simply indicates that the Commission has chosen not to allow any RPM agreements to benefit from a presumption of legality, without any examination of the individual case. Even under the new US approach, such agreements continue to require individual assessment.

6.5 What Room for Manœuvre Does the Current Law Provide?

6.5.1 Introduction

We have seen that RPM has so far been treated in practice in the EU as a *per se* infringement of Article 81(1), but always with the possibility, in principle, of exemption under Article 81(3). Therefore,

EU law in strict legal theory already provides, and always has done, for 'rule of reason' analysis, even of fixed and minimum RPM. On the other hand, enforcement policy, as evidenced in both the public statements of the enforcement authorities, and their practice, has been such that the impression of a *per se* prohibition has been created and persists.

So the irony of the 'Is nothing sacred?' reaction that I refer to above is that the *Leegin* judgment can be seen as bringing US law into line with EU law, which has never imposed an absolute legal prohibition on RPM. Peeperkorn (2008) has said that 'One could conclude that the *Leegin* judgment provides the US authorities and courts with the possibility of applying the same policy towards RPM as is currently applied in the EU...'.

Having established that the existing law is in fact in itself already much more flexible than is generally appreciated, it is still interesting to explore what scope there is for changing the existing law or policy, if this were to be considered desirable.

Amendment of Article 81 is neither politically feasible, nor necessary, given both its actual wording and its established interpretation by the ECJ, as already described. Even where Article 81(1) is infringed, the agreement will be legal under Article 81(3) if its benefits outweigh its restrictive effects. The wording of Article 81 is therefore in any case not a bar to a different approach to RPM, and there are moreover a number of other tools available to effect change.

6.5.2 Re-interpretation of Article 81(1)

RPM has always been treated as having an anti-competitive 'object' within the meaning of Article 81(1), and so has been *per se* prohibited, but recent case law indicates that such classification need not be absolute, meaning that in given circumstances it might be possible for a clause normally regarded as having an anti-competitive object to be analysed rather as one with a potential anti-competitive effect. Until recently prohibitions on export from one EU

Member State to another had always been treated as 'object' restrictions, but in *GlaxoSmithKline*³¹ it was held, admittedly in the very specific context of pharmaceuticals markets, that there could be situations in which such a clause might not have an anti-competitive object. Instead it had to be analysed as an 'effects' restriction, in the light of all the surrounding economic circumstances.

This means that in circumstances where RPM does not restrict competition, perhaps because it could be shown that without it the product in question would not be put on a particular market at all, the finding in law could be that Article 81(1) is not infringed.

Similarly, although in practice RPM has never been found not to have an appreciable effect on competition, this does represent one possible avenue for introduction of a change of Commission policy. This could be supported by an amendment to the Commission's Notice on agreements of minor importance, to provide that RPM does not restrict competition in the context of very low market shares.

6.5.3 Application of Article 81(3)

Perhaps the most obvious route for change is through Article 81(3). Although, as we have seen, this contains a kind of rule of reason, the practical likelihood that companies will be prepared to invest the necessary resources to allow them to establish that they satisfy the Article 81(3) criteria is currently very low. While in theory it is open to companies to adopt RPM, and be prepared to defend it as economically justified, they must be aware that they will face a stiff challenge, whether the issue comes before the Commission or a national authority, or any European or national court. Whereas companies engaged in large mergers understand that regulatory clearance may be an unavoidable expense of a profitable transaction, they do not expect to incur such high legal expenses in the context of

³¹ Case T-168/01 [2006] ECR II-2969, appeal pending Case C-501/06P.

setting up a distribution network. In reality therefore it could be a long time before the bounds of EU law on RPM are tested, unless the block exemption and guidelines are amended.

The Commission has the power to amend its own block exemption regulation and its guidelines. As far as the block exemption is concerned, RPM is unlikely to be taken out of the black list altogether, because the block exemption delimits agreements that are always presumed harmless, but the black list could be amended so as to narrow the circumstances in which RPM is excluded from the benefit of the regulation.

Additionally, or alternatively, either or both of the vertical restraints or Article 81(3) guidelines could be amended to indicate a more generous treatment of such clauses when they came to be considered under Article 81(1) and 81(3). In respect of the former, circumstances in which RPM does not restrict competition could be set out, maybe with accompanying examples. In respect of the latter, the possible benefits of RPM, and the circumstances in which they are likely to outweigh its harmful effects, could be articulated. Such guidance might be based, for example, on the kind of factors mentioned by the majority in *Leegin*.³² In addition, guidance on the burden of proof could in practice serve to change the outcome in given circumstances.

6.5.4 Role of the European Court of Justice

The European Court of Justice (ECJ) has at times during its fifty year life played a very active, even 'activist', role in developing Community law. There have been times, particularly during its early

³² Some economists (for example Allain and Chambolle, 2008) point out that RPM is beneficial only in some markets, such as 'luxury goods, where retail service accounts for a large part of the quality of the goods'. However, it would be hard to articulate a clear legal rule based on this type of distinction.

years, when it has been instrumental in ensuring a scope of application for Articles 81 and 82 EC that was by no means obvious at the outset. To mention just two examples, there are *Consten & Grundig*,³³ where the ECJ affirmed that Article 81 could sometimes limit the exercise of valid national intellectual property rights, and *Continental Can*,³⁴ where the ECJ held that Article 82 could apply to some mergers, though in recent years it has appeared more reluctant than in the past to provide such 'law-making' judgments. On the other hand it has also on occasion firmly reined in the Commission when it sought to extend the law beyond what was proper, as it did in *Bayer*,³⁵ when it insisted that Article 81 could not apply in the absence of an agreement, even where there was a clear intent to hinder trade between Member States.

When considering the extent to which the ECJ can be expected to play a role in any change of approach of the sort discussed above, it is important to note that, even when boldly developing the law, the ECJ tends to rely on taking the opportunity to endorse a development pursued by the Commission. Such 'law-making' cases usually come before the European Courts precisely because the Commission has stepped beyond the established boundaries of application of Article 81 or 82 EC. This means that the initiative would appear in practice to lie with the Commission to instigate a shift or change of this sort. This is illustrated in the Article 82 context, discussed below, by cases such as *Michelin II*³⁶ and *British Airways*.³⁷

³³ Joined Cases 56 and 58/64 [1966] ECR 299.

³⁴ Case 6/72 [1973] ECR 215.

³⁵ See fn.13.

³⁶ Case T-203/01 [2003] ECR II-4171.

³⁷ Case C-95/04P [2007] ECR I-2331. These two cases are rare examples of instances where reform-minded Commission officials may have been dismayed to have certain of their decisions, made on a traditional and formalistic basis rather than under a more economics-focused approach, upheld by the European Courts.

It is also noteworthy that the law-making cases above related to questions that had not come before the ECJ before, rather than to issues where the Commission effectively seeks a different answer to the one that has been given in the past, as would be the case if it was asked to find that an RPM clause did not infringe Article 81(1). This would be less of an obstacle if it were asked to approve exemption under Article 81(3).

The other way that the ECJ could find itself faced with the opportunity to rule on a more tolerant approach to RPM would be if it received a request for a preliminary ruling on such an issue from a national court with an RPM case before it. This might arise because a manufacturer sought to enforce an RPM clause against a distributor, or because, as in *Leegin*, a distributor sought damages on the basis that the RPM clause infringed competition law. Alternatively it might involve an appeal against a decision of a national competition authority. However, given the uncertainty of outcome inherent in any such litigation, it may be some time before any party decides to take this path.

6.6 Previous Policy Shifts in Favour of Economic Integrity

This is of course not the first time that a debate has arisen over how best to take account of economic learning in formulating competition law and policy. For example, when market share thresholds were first proposed in the context of block exemptions the idea was shouted down as providing rules that were too uncertain, with the result that the first technology transfer block exemption Regulation 240/96 was eventually adopted without such thresholds. Later they were introduced, over similar objections, into the vertical restraints block exemption Regulation 2790/1999, and appear to have proved remarkably workable.

On the other hand, the Commission's experience of reviewing its Article 82 enforcement policy has been more mixed. A Discussion

Paper on exclusionary abuses under Article 82, published by DG Comp in December 2005, generated a huge volume of useful debate between enforcers, academics, legal and economics practitioners, business and other interested parties. This was undoubtedly extremely helpful in raising awareness of many issues, but it has been less successful in terms of producing clear guidance for those who have to apply the law. While a number of special considerations apply to Article 82 and to the economics associated with its application, which are particularly complex, there may be lessons from this exercise relevant to the RPM debate.

Essentially, it was clear that there was strong demand for a high level of legal certainty and at the same time for enforcement consonant with economic integrity. Suggestions of certain *per se* rules or 'bright lines' tended to be met with objections from economic purists, while sophisticated economics-based analysis was often decried as unworkable because too difficult to apply on a day to day basis. Almost three years on, published guidance is yet to emerge.³⁸ Nor, as already mentioned, does the ECJ seem inclined to take any initiative towards reform.

6.7 The Importance of Certainty in the Law: *Stare Decisis*

The importance of certainty in the law is more than an assertion of common sense. It has been elevated to the status of high principle in a number of legal systems, including that of the United States. While it is not formally part of European Community law, in practice it is exceedingly rare that the ECJ does not follow its own previous decisions.

³⁸ The Commission is expected to publish guidance before the end of 2008, but this is likely to be considerably reduced in scope from what might at one time have been envisaged.

The US Supreme Court discusses this issue in its *Leegin* judgment, and indeed it is one of the main grounds on which the dissenting judgment is based, with Breyer J. citing earlier cases describing the principle as embodying a policy judgment that 'in most matters it is more important that the applicable rule of law be settled than that it be settled right'. However, the majority for various reasons did not consider themselves bound by this principle in this case. In particular they opined that antitrust statutes may be different from other types of statute, where the *stare decisis* principle should normally be respected. They qualified the Sherman Act as having special 'common law' status.

The potential importance of this factor is shown by the fact that, for the four dissenting judges in *Leegin*, it appears to have been the single most important consideration, with Breyer J, expressing it as follows: 'Were the court writing on a blank slate, I would find these questions difficult. But, of course, the court is not writing on a blank slate, and that fact makes a considerable legal difference'. He considers six factors relevant when a court is deciding whether or not to abide by the *stare decisis* rule, and concludes that they all indicate that the *per se* prohibition on minimum RPM should be retained.

In the EU, the maintenance of the current policy on RPM would have the not inconsiderable advantage of maintaining clarity and certainty for those applying the law at national level. Many national competition laws are themselves modelled on Articles 81 and 82 EC, and are even required in a number of Member States, including the United Kingdom and Belgium, to be interpreted in the light of Community law. To change the approach at EU level could create confusion or conflict in national authorities and courts, in the interpretation of both EU and national law. Furthermore, many Member States are known to prefer a clear prohibition of RPM, and even were the Commission to change its policy, Member State bodies might not do so, at least in the absence of clear endorsement of the new policy from the ECJ.

6.8 The Importance of Certainty in the Law: International Convergence

In the context of certainty it can also be asked whether, even if *Leegin* does herald a divergence of approach between the US and the EU, this matters. The desirability of 'convergence' across competition law jurisdictions is oft-discussed – but is it necessarily problematic if EU policy is in some respects at odds with that in the US? Sir John Vickers (2007), speaking before the *Leegin* case had been decided, opined that if the *per se* rule were abandoned in the US then reappraisal of the European approach would be appropriate. While he appears to be in favour generally of convergence between the two jurisdictions, his statement followed in particular from his view that the European policy approach relied for its legitimacy, at least to some extent, on the similar US approach.

The US legal environment is very different to that of the EU. For example, the vast majority of enforcement in the US consists of private actions in the courts, generally heard by juries and potentially leading to awards of treble damages. In such an environment it is understandable, as argued by Kolasky (2008), that a *per se* prohibition should apply only to conduct that is always, or almost always, harmful. In the EU such damages actions remain much rarer and awards are decided by judges, and limited to the amount of loss actually suffered. In addition, the current EU law on RPM does not feature the kind of complexity evident in the pre-*Leegin* US law, as described above.

Conclusions

Economists generally regard the European Commission's current approach as a very blunt instrument in terms of maximising consumer welfare, and it is undoubtedly true that a more generous treatment of RPM would provide a finer instrument and probably some better individual decisions. But such an approach could be costly in terms of resources, both for companies and enforcers. Moreover, when the Commission is pondering what its future policy on RPM should be, it has a number of factors to take into account, beyond the economics-based arguments for and against such arrangements.

To mention the key non-economic considerations, firstly, any policy adopted must be clear and simple enough to be applicable by businessmen, and easily administrable by enforcement officials. Secondly, the US *Leegin* judgment remains sufficiently controversial, and its impact sufficiently uncertain, for the Commission to be justified in exercising great caution in drawing any lessons from it. This is even more the case, given that the US legal environment, and its previous treatment of RPM, is very different from that in Europe. Thirdly, the Commission will be aware that, despite the fact that the ECJ is not formally subject to a rule of *stare decisis*, it has rarely departed from a previously established position, and in recent years its approach to developing the law has tended to be rather conservative. Fourthly, Commission's recent experience of reviewing its Article 82 enforcement policy may have taught it that even where economic theory might argue for policy change, in practice attempts at change can raise some intractable problems.

The final outcome of the EU review is therefore not likely to involve dramatic change, and not least because the law already provides for a measure of flexibility, approximately equivalent to the US rule of reason, which was never available to RPM agreements in the US prior to *Leegin*. Another reason why any change is likely to be on a small scale is that EU competition policy is still shot through with the 'single market imperative' and this, together with strong

support in a number of Member States for retaining a rule of illegality for RPM, militates against any much greater tolerance towards it. The block exemption is therefore likely to remain more or less unchanged on this point, and any softening of the stance towards such clauses that may appear in either the vertical restraints guidelines or the Article 81(3) guidelines is likely to be minor.

Those responsible for the review undoubtedly have a difficult course to plot in maintaining the twin aims of practical administrability of the law and economic integrity, while also taking into account other relevant factors. But though unreconstructed lawyers would be wrong to regard current EU policy as sacred, they can be fairly confident that it is likely to emerge from the review fundamentally unscathed.

References

- Allain, M.L. and Chambolle, C. (2008), 'The Recent Economic Debate on the Welfare Effects of Resale Price Maintenance', *Concurrences* No.3-2008, 14-16
- Alese, F. (2007), Unmasking the Masquerade of Vertical Price Fixing, *European Competition Law Review*, 514-526
- Carney, P.J. and McAhren, K. (2008), 'Resale Price Maintenance Agreements after *Leegin*', *Concurrences* No.3-2008, 17-23
- Jones, A. (2008), 'Completion of the Revolution in Antitrust Doctrine on Restricted Distribution – *Leegin* and its Implications for EC Competition Law' *Antitrust Bulletin* (forthcoming)
- Jones, A (2006), 'Analysis of Agreements under U.S. and EC Antitrust Law – Convergence or Divergence?' 51 *Antitrust Bulletin* 691
- Kolasky, W. (2008), 'Different Roads', *Global Competition Review*, February 2008 17-21
- Peeperkorn, L. (2008), 'Resale price maintenance and its alleged efficiencies' *European Competition Journal* 4, 201-212
- Vickers, J. (2007) Burrell Lecture 2007: 'Competition Law and Economics: a Mid-Atlantic Viewpoint' *European Competition Journal* 3, 1-14

Other books in the same series

2007: The Pros and Cons of High Prices

Could there be any pros of high prices? The question is as natural as the question we got four years ago when we published *The Pros and Cons of Low Prices* – could there be any cons of low prices? These are questions competition authorities get from the public from time to time. It is a somewhat hard pedagogical task to answer them. The answer to both questions is yes, there are indeed pros of high prices and cons of low prices. This volume is devoted to exploring the pros and cons of high prices. We have solicited contributions from experts in the field, covering the main streams of development and discussing policy issues related to excessive prices in the light of these developments.

2006: The Pros and Cons of Information Sharing

This book focuses on information sharing between firms. Good information will allow firms to plan production and marketing activities, to invest in new capacity or in R&D and to price their products competitively. Similarly, consumers will be able to make rational choices if they are well informed about different products' prices and characteristics. On the other hand, detailed information about rivals' prices, production and sales can help stabilize cartels, by making it easier for the cartel members to monitor each other. In this volume some of the world's leading researchers present their view of the use of information sharing and how it could and should be handled by the competition authorities.

2005: The Pros and Cons of Price Discrimination

This book investigates the different aspects of price discrimination and its relation to competition law. Firms in most markets, both competitive and more concentrated markets, tend to price discriminate, i.e. to charge consumers different prices for the same (or almost the same) product. In some instances, this is a problem because it hinders competition, in others it is not; in fact, it is beneficial for the consumers. In this volume some of the world's leading researchers present their view of the use of price discrimination and how it is, could and should be handled by the competition authorities.

2004: The Pros and Cons of Antitrust in Deregulated Markets

This volume is about the intersection of competition law and sector specific regulation. When is competition law sufficient and when is sector-specific legislation necessary? What are the advantages of relying only on competition law? And which are the drawbacks? Although the authors mainly discuss energy and telecom markets, the principles they base their discussions on are of a general nature. They all subscribe to the view that competition is desirable and that markets should be liberalised, rather than monopolised. Despite this, they hold different views on the necessity of complementing competition law with sector specific regulation. According to some, competition law is sufficient in deregulated markets; according to others, the special properties of certain markets makes it necessary to introduce specific regulatory measures.

2003: The Pros and Cons of Low Prices

The book is about predatory pricing; an issue that has intrigued and bewildered the competition policy community for a long time and

where conflicting views are held. The problem and the challenge for competition policy are to draw the fine line between pro-competitive pricing behaviour on the one hand and predatory pricing as an instrument of abuse on the other.

The purpose of this book is to assess predatory practices from a competition policy perspective and the implications of recent theoretical and empirical developments for a consistent treatment of such practices in competition policy. We have solicited contributions from experts in the field, covering the main streams of development and discussing policy issues related to predation in the light of these developments.

2002: The Pros and Cons of Merger Control

The book is intended to serve as a contribution to the debate on merger control and consists of four individual contributions from independent scholars and professionals with an expertise in economics. Naturally, the opinions expressed are those of the authors alone.

The pros and cons of merger control are high on the agenda of policy makers, competition authorities, academics, representatives of industry and labour organizations, and others. The need for merger control is widely supported - but the specific principles and tools by which it should be exercised are subject to discussion and debate, and also revision. The review of the Merger Regulation in the Green Paper by the European Commission has raised several fundamental questions.

The pros and cons of changing the “substantive test” from the dominance standard to the SLC-test (“Substantial Lessening of Competition”) is an issue that needs careful scrutiny. The concept of collective dominance and other issues such as jurisdiction, efficiencies, and procedures are also of great importance.

The books can be ordered from our website www.konkurrensverket.se