

RESEARCH OUTPUTS / RÉSULTATS DE RECHERCHE

Excessive Pricing in Competition Law

Motta, Massimo; De Streel, Alexandre

Published in:

The Pros and Cons of High Prices

Publication date:

2007

Document Version

Early version, also known as pre-print

[Link to publication](#)

Citation for pulished version (HARVARD):

Motta, M & De Streel, A 2007, Excessive Pricing in Competition Law: Never say Never ? in *The Pros and Cons of High Prices*. Swedish Competition Authority, Kalmar, pp. 14-46.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

The Pros and Cons of High Prices

Konkurrensverket
Swedish Competition Authority

© 2007 Konkurrensverket
Swedish Competition Authority
Individual chapters © 2007 The Contributors
ISBN-978-91-88566-42-3
Printed in Sweden by
Lenanders Grafiska 26779, Kalmar 2007

Preface

“The Pros and cons of High Prices” is the sixth 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 9. The authors 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, Damien Neven. At the Swedish Competition Authority, Niklas Strand and Arvid Fredenberg have managed the project and acted as editors; they both deserve due credit. Finally many thanks to Bengt Kopp and Fariba Gerayeli, who provided invaluable assistance in organizing the conference and in producing this conference volume.

Stockholm, November 2007

Claes Norgren

Director-General

Table of contents

The Contributors	5
1 Introduction.....	9
<i>By Arold Fredenberg</i>	
2 Excessive Pricing in Competition Law: Never say Never?	14
<i>By Massimo Motta and Alexandre de Streel</i>	
3 Exploitative high prices and European competition law – a personal reflection.....	47
<i>By Nils Wahl</i>	
4 The Paradox of the Exclusion of Exploitative Abuse	65
<i>By Bruce Lyons</i>	
5 Should Innovation Rationalize Supra-Competitive Prices? A Skeptical Speculation	88
<i>By Tim Brennan</i>	
6 Excessive Pricing.....	128
<i>By Mark Williams</i>	

The contributors

Massimo Motta is currently Professor of Economics at the European University Institute, Florence, where he was Head of the Economics Department (2003- 2005), and at the Università di Bologna (since January 2007). He is also the Scientific Director of the *Master in Competition and Market Regulation*, a programme of the Barcelona Graduate School of Economics. Previously (1992-2006), he was professor at Universitat Pompeu Fabra. He is also a Research Fellow of the Centre for Economic Policy Research, London, and of CESifo, Munich, as well as member of the Executive Committee of the Association of Competition Economists, of the Economic Advisory Group on Competition Policy at the European Commission, and of the Expert Academic Panel of Ofcom, London. He is an associate editor of the Journal of the European Economic Association.

His degrees include: laurea in Discipline Economiche e Sociali, Università Bocconi, Milano (1987); Master of Arts in Economics, Université Catholique de Louvain (1989); and PhD (European Doctorate) in Quantitative Economics, after studies at the London School of Economics and the Université Catholique de Louvain (1991).

Professor Motta's main areas of research are industrial organization and in particular competition policy, but he has also worked on international trade and multinational firms. His work has been published in several leading international journals, including the *American Economic Review*, *Economic Journal*, *European Economic Review*, *International Economic Review*, *International Journal of Industrial Organization*, *Journal of Economics and Management Strategy*, *Journal of Industrial Economics*, *Journal of International Economics*, and the *Scandinavian Journal of Economics*.

Massimo Motta's book on *Competition Policy: Theory and Practice* (Cambridge University Press), published in 2004, is the standard

international reference on the economics of antitrust. He has extensive experience in supervising doctoral dissertations, and his former students have obtained important positions in academia, consulting firms, and in competition and regulatory agencies.

Alexandre de Streel is Professor of European Law at the University of Namur (Belgium). His research interests focus on electronic communications regulation and on competition policy. He has published extensively on the topic in telecommunications as well as antitrust reviews and is a regular speaker in academic and commercial conferences. Between 2000 and 2003, he was an expert in the Regulatory Policy Unit of DG Information Society and Media of the European Commission. He holds a PhD in Law (European University Institute, Florence) and a degree in Economics (University of Louvain, Belgium).

Nils Wahl is a Judge at the Court of First Instance since 7 October 2006. Born 1961; Master of Laws, University of Stockholm (1987); Doctor of Laws, University of Stockholm (1995); Associate Professor (docent) and holder of the Jean Monet Chair of European Law (1995); Professor of European Law, University of Stockholm (2001); Assistant Lawyer in private practice (1987-1989); Managing Director for an educational foundation (1993-2004); Chairman of the Swedish Network for European Legal Research (Nätverket för europarättslig forskning) (2001-2006); Member of the Council for Competition Law Matters (Rådet för konkurrensfrågor) (2001-2006); Assigned judge to the Court of Appeal for Skåne and Blekinge (Hovrätten över Skåne och Blekinge) (2005).

Bruce Lyons is Professor of Economics and Deputy Director of ESRC Centre for Competition Policy at the University of East Anglia. He was previously Dean of the School of Economic and Social Studies at UEA and Editor of the *Journal of Industrial Economics*. He has degrees from Cardiff (BSc), LSE (MSc) and Sheffield (PhD) and taught at Cambridge 1979-85. He has had visiting fellowships at EUI Florence

and the University of Melbourne. He is a part-time Member of the UK Competition Commission, and a Member of the *Economic Advisory Group for Competition Policy (EAGCP)* to the *European Commission*.

Professor Lyons has published research on international trade and IO, economics of market structure, contracts between firms, empirical transaction costs, merger policy and evaluation of competition policy. His current research is in the latter two areas. He has written several advisory reports for the Commission, including one recently on merger remedies, and has acted as an expert witness in a case relating to the economic organization of British horseracing.

Tim Brennan is a professor of public policy and economics at the University of Maryland Baltimore County (UMBC) and a senior fellow with Resources for the Future (RFF). During 2006, he held the T. D. MacDonald Chair in Industrial Economics at the Canadian Competition Bureau. He has been an economist with the Antitrust Division of the U.S. Department of Justice and taught at George Washington University. From 1996-97, he was a senior economist for the White House Council of Economic Advisers, and in 2003-05 served as a staff consultant to the U.S. Federal Trade Commission. He has advised on competition law internationally, including Mexico, the Slovak Republic, Russia, and Uzbekistan.

Prof. Brennan's antitrust research has examined vertical integration, *per se* rules, and interconnection agreements, with applications to regulated sectors and Microsoft. He is currently focusing on exclusion, particularly bundled rebates. His publications also address topics in regulation, copyright, electricity, telecommunications, media policy, environmental economics, and ethics. With Karen Palmer at RFF, he co-authored two books on electricity deregulation, including *Alternating Currents: Electricity Markets and Public Policy* (2002). He co-edits *Economic Inquiry* and is on the editorial boards of the *Journal of Regulatory Economics*,

Information Economics and Policy, Communications Law and Policy, and the International Review of the Economics of Business.

Prof. Brennan received a B.A. in mathematics in 1973 from the University of Maryland in College Park, and PhD in economics in 1978 from the University of Wisconsin in Madison.

Mark Williams is a Director at NERA Economic Consulting where he leads their European Competition Policy group in London and Brussels. Over the last decade he has advised on numerous high-profile merger and monopoly investigations. He has acted on various ECMR Phase 2 mergers including Universal-BMG (music publishing), Dong-Elsam-E2 (Nordic energy) and Inco-Falconbridge (nickel mining) for the merging parties, defended Abbey National against Lloyds TSB, and advised intervenors in BSkyB-Manchester United. In market investigations his cases include supermarkets, airports, motor vehicles, milk and pharmaceuticals, whilst he has also acted for companies in abuse of dominance cases before the EC, OFT, CAT and sectoral regulators.

1 Introduction

Arvid Fredenberg

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.

In the first contribution, Massimo Motta and Alexandre de Streele guide us through the last years' policy debate regarding the treatment of excessive pricing. They call for extreme caution when taking action against excessive prices. In view of the different suggested methods, they propose a three plus one-condition test that has to be fulfilled. The first condition is that there should be high and non-transitory entry barriers leading to a super dominant position. When talking about a monopoly or a quasi-monopoly some of the usual arguments against excessive price action may not apply. The second condition reads: the super-dominant position is due to current/past exclusive/special rights or to un-condemned past exclusionary anticompetitive practices. This excludes cases where firms have gained their super-dominant position in a free market via innovations or investment. Many of the cases that pass these two conditions would be sector regulated industries. Here the authors suggest that the sector regulator tackles the excessive prices and hence they state a third condition: no sector-specific regulator has jurisdiction to solve the matters. Finally, they impose an additional condition namely that the competition authority should choose the most efficient remedy to solve the anti-competitive excessive price.

Motta and de Streel then compare these conditions with the case law and find that they fit quite well. They go on by discussing the pros and cons of the different indicators that have been used to find excessive prices and recommend that “*antitrust authorities and courts should carry out excessive pricing tests according to as many of the methods indicated above as possible.*”

Nils Wahl gives, in the second contribution, his personal reflection on the European case law regarding excessive prices. He considers the cases *General Motors* and *British Leyland* as dealing with the prevention of parallel trade rather than excessive prices. In other cases featuring legal monopolies he does not find much guidance on how to assess excessive prices; sometimes it is not clear whether the court rulings deal with exclusionary high prices or exploitative high prices. In *United Brands*, the court sketched out a method for assessing excessive prices, but the Commission decision was annulled. His conclusion from the case law is: “*the Court has not yet condemned a particular pricing practice, in a free and unregulated market, as amounting to unfairly high and exploitative prices and thus constituting an infringement of Article 82.*”

Wahl interprets the Commission decision in *Scandlines* as an indication that no price lower than the profit-maximizing monopoly price would ever be seen as an excessive price. Since no profit-maximizing firm would like to charge a price higher than the monopoly price, the scope for using the prohibition of exploitative excessive prices would be confined to legal monopolies or regulated markets.

Bruce Lyons starts the third contribution with the apparent paradox of the exclusion of exploitative abuse. Monopoly pricing is the textbook abuse that every economics student learns in the first year of study. In other areas of competition law, the policy is concerned with attacking price-raising cartels, price-raising mergers and exclusionary abuse that lead to consumer exploitation. Yet, most competition economists do not want to see action against direct exploitation; why is it so?

In order to gain an understanding into the issue he discusses four topics: measurement, market dynamics, multi-sided markets and remedies. The task of measuring costs is inherently tricky and the list of problems is very long. Even so, Lyons points to the fact that cost measurement is necessary also when it comes to the examination of exclusionary abuse and in particular the design of efficient remedies. Competition authorities cannot back away from the task of measuring costs.

A newspaper provides benefits for both readers and advertisers and the pricing towards these groups can seem unrelated to the costs. In these types of multi-sided markets it is important to take into account the positive externalities between the groups. If this is done properly, Lyons states that: *"apparently very high prices about which some customers complain very loudly may be part of a reasonably optimal payments package when all groups of consumers and investment incentives are properly taken into account."*

In the end of the contribution, Lyons summarises the main reasons why exploitative effects are seldom attacked. Exploitative effects are: naturally shorter lived and more dangerous to remedy; possibly mainly due to structural entry barriers; harder to prove to the standard required by the Court and politically more difficult to deal with.

Timothy Brennan focuses the fourth contribution on the contrast between static efficiency and dynamic efficiency. Should we allow firms to exploit market power in the short run in order to stimulate innovation? He dives into the literature and dissects the arguments put forward in favour of a non-interventionist approach. Does innovation require monopoly profit? Does innovation require monopoly structure? Is innovation promoted by higher prices for substitutes? Brennan answers in the negative on all these questions. The answer is that we know too little on the relation between market power and innovation, hence there is no reason to weaken antitrust policy.

If we want to stimulate innovation, Brennan argues that there are other methods than antitrust policy which are better suited to the

task. He points to one of the fundamental lessons of macroeconomics, namely that addressing N policy objectives requires N policy instruments. So if we both want to maximize short-run economic welfare by acting against anticompetitive practices and promote the efficient level of innovation, both objectives cannot be reached by competition law only. He concludes by saying: *"The demand for a general rule that 'dynamic trumps static' thus may be little more than a rhetorical strategy to make life easier for defendants."*

In the last contribution, Mark Williams asks the question: excessive prices – do we care, and how would we know? We are more tolerant towards excessive prices as such compared to cartels or mergers to monopoly even if the outcome is the same. This implies that the way the excessive prices are achieved matters. He goes through several good reasons why this is so.

The main exercise in the remaining of the contribution is to figure out what is the correct benchmark to use in excessive pricing cases. The starting point is that a price can only be excessive if it allows the firm in question to make a profit that is excessive. In order to assess if a profit is excessive, Williams put forward five sequential criteria: First, excessive profits as given by return on capital "substantially higher" than the cost of capital calculated by CAPM. Unfortunately, we do not know how much higher. Secondly, the profits remain at that level for a "significant" period of time. The time period should preferably be so long that all investments are amortised. Thirdly, the ex-post recorded profits have been adjusted for ex-ante risk and hence attendant survivorship bias. Here, he suggests that *"a very simple way to take this into account is to include the capital investments of all investors in the market in the capital base of the winner"*. Fourthly, the capital base has been grossed up to include the (risk adjusted) cost of intangibles. Fifthly, the recorded profits are over the project reduced by the "wage cost of entrepreneurship".

Taken together, the five contributions shed light on the issue of the pros and cons of high prices. Hopefully, this volume contributes towards a better understanding of the mechanisms through which

high prices have an impact on markets – and towards a more effective enforcement of the competition rules.

2 Excessive Pricing in Competition Law: Never say Never?

Massimo Motta and Alexandre de Streel***

2.1 Introduction

In an article written for the European Competition Law Conference in 2003,¹ we discussed the treatment of excessive pricing in the European Union, commented upon the case-law, and indicated which exceptional circumstances might in our view justify resorting to excessive pricing actions. We proposed a four-condition test: (1) high and non-transitory barriers to entry leading to a monopoly or near monopoly; (2) this (near) monopoly being due to current or past exclusive or special rights; (3) no effective means to eliminate the entry barriers; and (4) no sector regulator being competent to regulate the excessive prices.

Since 2003, our paper has been followed by many others, some proposing a more lenient test for the competition authority to intervene² while others suggesting a stricter test of intervention.³ Excessive pricing has been discussed more and more for at least two reasons. The first one is that the European Commission is reconsidering its policy on Article 82 of the EC Treaty, and although exploitative practices have not been addressed yet in its policy

* European University Institute, Florence and Università di Bologna.

** University of Namur. The authors thank Ph. Choné, D. Neven and the participants of the seminar on the Pros and Cons of High Prices for their very helpful comments.

¹ See Motta and de Streel (2006).

² Among others: Fletcher and Jardine (2007), Paulis (2007), Röller (2007).

³ Among others: Evans and Padilla (2005).

documents, it is well known that the Directorate General for Competition plans to deal with them in the future Guidelines on Article 82 enforcement.⁴ The second reason is that dissatisfaction with the outcome of the liberalisation process (more particularly with the high level of prices in many recently privatised and de-regulated sectors, as for instance energy),⁵ which has taken place in Europe has led many policy-makers – both at the level of Member States and at the EU level – to call for drastic measures of intervention, including structural remedies (for instance unbundling in energy and telecommunications) and price controls.

In this paper, we come back to the issue by summarising our previous contribution and especially by discussing our policy proposal, in the light of recent developments. We limit our analysis to excessive prices which directly exploit the consumers where, as we show, the conditions for antitrust intervention should be very strict. We do not deal with exclusionary excessive prices (which often take the form of price squeezing) where the conditions for antitrust intervention may be less strict.

The paper is organised as follows. After these introductory remarks, Section 2.2 sets very briefly the legal framework of exploitative abuses. Then Section 2.3 proposes a three condition screening test to determine the markets that are candidates for intervention of excessive pricing actions. Section 2.4 deals with the standard of proof for the excessive pricing. Section 2.5 deals with the choice of the efficient remedy. Finally, Section 2.6 concludes with some recommendations for an efficient dealing of excessive pricing.

⁴ Lowe (2007).

⁵ Communication from the Commission of 10 January 2007, Final Report of the Sector inquiry into the European gas and electricity sectors, COM(2006) 851; van der Woude (2007).

2.2 The legal framework

Article 82(a) of the EC Treaty explicitly prohibits a dominant firm⁶ from “directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions”. Since most Member States’ competition laws are borrowed from the EC Treaty, similar provisions exist throughout the EU’s national jurisdictions as well. Since in the US the case law excludes the possibility of using excessive pricing actions,⁷ this is an area of antitrust where there is a wide divergence between the two sides of the Atlantic.

Although excessive price actions have been relatively rare, the case law of the Court of Justice helps understanding what an excessive price is and how it can be proved.

Since its well-known *United Brands* case, the Court of Justice established that a price is unfair when a dominant firm has “exploited” its dominant position so as to set prices significantly higher than those which would result from effective competition. Hence, a price is excessive and unfair when it is significantly above the effective competitive level, or above the economic value of the product. This should correspond, in the Court’s view, to the normal competitive level. Indeed, in *United Brands* the Court stated that:

249. It is advisable therefore to ascertain whether the dominant undertaking has made use of the opportunities arising out of its dominant position in such a way to reap trading benefits which it would not have reaped if there had been normal and sufficiently effective competition.

250. In this case charging a price which is excessive because it has no reasonable relation to the economic value of the product would be an abuse.

⁶ A firm holds a dominant position if it possesses enough market power to behave to an appreciable extent independently of the competitors, customers and ultimately consumers. Case 27/76 [1978] ECR 207, para. 65.

⁷ *United States v. Trans-Missouri Freight Ass.*, 166 U.S. 290 (1897); *United States v. Trenton Potteries Co.*, 273 U.S. 392 (1927); *United States v. Aluminium Co. of America*, 148 F.2d 416 (2d Cir. 1945).

2.3 A screening test to take an excessive price action

In this section, we discuss which markets are candidates for intervention of excessive pricing actions. First, we briefly recall the pros and cons of using excessive pricing actions within competition law. Second, we review the main tests that have been proposed so far by different commentators. Third, we identify some exceptional circumstances under which it may make sense to resort to competition law's provisions on excessive prices. Fourth, we check whether our exceptional circumstances test corresponds to the case-law and decisional practice in the European Union.

2.3.1 The Pros and Cons of using excessive pricing actions

There are several well known objections against the application of competition law to excessive pricing cases.⁸

- i. Excessive price actions may undermine the investment incentives of new entrants. Indeed, competition law applies to sectors where in principle market forces are free to operate. Unlike sectors characterised by legal barriers to entry or where market failures are such that one cannot assume that competition works, competition authorities deal therefore with sectors where one can presume that free entry should be able to erode over time dominant positions. To some extent, prices also play an important role in this process, as they convey signals to potential entrants: in particular, high prices may indicate that a market is profitable, and trigger entry into the industry, thereby reducing the market power of a

⁸ See also Fletcher and Jardine (2007), O'Donoghue and Padilla (2006: 621-628), Röller (2007).

dominant firm and decreasing prices. Excessive pricing actions may therefore have the effect of breaking this process, and while in the short run they might be beneficial in that they could reduce prices, in a long run perspective they would be detrimental because they may impede entry that could otherwise take place (the objection is all the more important if one considers that excessive price actions are unlikely to be repeated over time). Furthermore, this may also have the effect of depriving consumers of more variety, to the extent that new entrants would supply substitutable but different products and services with respect to those of the dominant firm.

- ii. Excessive price actions may also undermine the investment incentives of the dominant firms. High prices and profits should be seen in general as the reward for a firm's efforts, innovations and investments, and firms indeed invest and innovate precisely because they are able to appropriate the benefits from their risky investments. Hence, however beneficial excessive price interventions may be *ex post*, if a competition authority pursued a policy of resorting to excessive pricing actions, this policy would have important negative effects *ex ante*, by lowering expected returns, and therefore discouraging firms' investments in all the economy.⁹ This objection is particularly relevant in highly dynamic industries where innovation plays a crucial role.
- iii. Another common objection to the use of excessive pricing actions by competition authorities is that it is extremely difficult to determine whether a price is excessive. This leads to unclear criteria for the standard of proof (see section 1.4) and therefore, an important legal uncertainty for the firms, which may in turn undermine investments incentives.

⁹ This important conflict between *ex ante* and *ex post* approaches has been explicitly recognised by the Advocate General Jacobs in his Opinion in Case C-7/97, *Bronner* [1998] ECR I-7791.

- iv. In addition, price regulation may have a strong “political” dimension, in the sense that politicians, under the pressure of consumers/electors, may want to have low prices for basic goods or services. They may then require that the Administration or the independent antitrust authority regulates the prices, although there is no market failure justifying such intervention. Some may argue that it is better for the antitrust authority to come in because it would create less damage to the market mechanisms than the Administration which may be less in tune with market economics. We disagree and consider that, outside market failure, an antitrust authority lacks political legitimacy to intervene on the market.
- v. Finally, US law focuses solely on exclusionary abuses (being by a dominant company or not) and does not intervene in case of mere exploitative abuses. In order to harmonise competition policy across jurisdictions, EU law may then ignore exploitative abuses.

An additional common objection against excessive price action is that it would lead to price regulation, which is difficult to implement. Indeed, intervening in an occasional way on the price set by a dominant firm does not solve the problem forever (on the contrary, to the extent that it may discourage entry, it may even exacerbate it and make it permanent). As a result, either the competition authority or the Court continues to monitor the industry – but in this way it would convert itself into a *de facto* regulator and would have to sacrifice important resources – or would have to resign to see its intervention as ineffective, since market conditions change over time and the dominant firm would adjust its prices to them. Moreover competition authorities – unlike sectoral regulators – have no experience and no role in telling firms which prices they should charge. However, the objection is not always convincing as the finding of an abuse and the choice of remedy should be kept separate. Indeed, there are other ways – and often more easily

implemented and efficient ways- to deal with an excessive price abuse (see section 1.5 on remedy).

On the other hand, there are also arguments in favour of the application of excessive pricing cases.¹⁰

- i. Exploitative abuse is the most direct violation of the consumers' interest that antitrust policy aims to protect and there are some exceptional circumstances where the structure of the market and the institutional design would lead to an excessive price that could only be remedied by competition law.
- ii. With a carefully calibrated policy, it is possible to alleviate some of the difficulties mentioned above. In particular, it might be possible to avoid that intervention could undermine the investment incentives of the new entrants and of the dominant companies.

Thus,¹¹ those Pros and Cons imply that an antitrust excessive price action presents a *high risk* of type I (false condemnation) and a *high risk* of type II (false acquittal) errors. At the same time, such action presents a relatively *high cost* of type I error (because the market may self-correct and error will lead to dynamic inefficiency: low investments and innovation) and a relatively *low cost* of type II errors (allocative inefficiency). Thus, an optimal competition policy should provide for strict conditions to determine candidates markets for intervention as well as a high standard of proof.¹²

¹⁰ See also Fletcher and Jardine (2007), Lyons (2007). Choné points to us an additional argument in favour of excessive price action. In markets where there is a risk of excessive entry because of expected very high return (due for instance to network effects), it may be efficient for the antitrust authority to commit ex ante to regulate price, hence limiting the incentive to enter.

¹¹ See Evans and Padilla (2005).

¹² Because of the important cost of type I error, in particular in terms of deterrence effects, Fletcher and Jardine (2007) suggest (in addition to strict

This is even more the case because the resources of the competition authorities are limited and are in general more efficiently allocated when dealing with exclusionary abuses rather than the exploitative abuses.

2.3.2 The different tests proposed so far

Several commentators have recently proposed conditions for an antitrust authority to take anti-competitive price actions.

The strictest test has been proposed by Evans and Padilla (2005:119) who suggest that three conditions should be met for the antitrust authority to intervene (1) the firm enjoys a (near) monopoly position in the market, which is not the result of past investments or innovations and which is protected by insurmountable legal barriers to entry; (2) the prices charged by the firm widely exceed its average *total* costs; and (3) there is a risk that those prices may prevent the emergence of new goods and services in adjacent markets.

O'Donoghue and Padilla (2006: 638) suggest a slightly less restrictive three-condition test. For them, intervention should be restricted to industries: (1) protected by high barriers to entry; (2) where one firm enjoys considerable market power; and (3) where investment and innovation play a relatively minor role.

Röller (2007) proposes a five-condition test: (1) there are significant entry barriers, (2) the market is unlikely to self-correct, (3) the dominant position was due to exclusionary abuse or government actions, (4) there is no regulator or there is a regulatory failure, and (5) no (structural) remedy is available.

Along the same vein although more nuanced, Fletcher and Jardine (2007) suggest a policy approach which would (1) limit intervention when there is no possibility of successful new entry

rule for intervention and high burden of proof) to limit available remedies by excluding the possibility of fines and private damages in case of excessive price actions.

within a reasonable period and commit to no intervening during the patent period, (2) consider carefully the pricing and competition in the other markets of the dominant firm's portfolio and the effect of any *ex post* intervention on *ex ante* investment incentives, (3) seek alternative structural remedies to price regulation and, in any case, exclude fines and private damages.

Paulis (2007) proposes the least restrictive test arguing that there is only one reasonable criterion to identify markets that could be candidates for interventions against excessive prices: the presence of very high and long lasting barriers to entry and expansion.

2.3.3 A three condition screening test for using excessive pricing actions

Because of the high risk and cost of type I error, we believe that extreme caution should be exercised in the use of excessive pricing actions. Yet, there may be some very exceptional circumstances where such actions may be justified. Those exceptional circumstances may be captured in a three condition screening test: the two first conditions relate respectively to the level and the origin of the market power of the investigated firm whereas the third one relates to institutional design of the sector.

Condition 1: High and non-transitory entry barriers leading to a super dominant position

To start with, consider that most of the arguments made above follow from the assumption that a sector subject not to regulation but to general competition law is a sector where market forces are free to operate and one expects the competitive process to work more or less well. Yet, there may be sectors where, for different reasons, this may not be the case.

This leads us to the *first necessary (but not sufficient) condition* for using excessive pricing actions in competition law, that is, *the*

presence of high and non-transitory barriers to entry. Given the objections against excessive price actions, the threshold for intervention should be higher than a mere dominant position and close to a super dominant position where the undertaking should have very important market share.¹³ In this case, we would have a monopolist (or quasi-monopolist) whose position is not likely to be challenged by entrants. Since one cannot expect market forces to operate normally, some of the objections against excessive price actions may therefore not apply.

In this context, a particular question is whether excessive prices actions could be taken in case of joint or collective dominance. Lately, there has been a temptation to use such actions to deal with cases where firms are engaging in tacit collusion. We feel this is not appropriate because it would add two instances where the risk and cost of type I errors are particularly high. Indeed, it is very difficult for an antitrust authority to discriminate between collusive and non collusive outcomes when there is no agreement or facilitating practices, and it is very difficult to discriminate between competitive and excessive prices. Thus when the market structure is unsatisfactory and leads to presumed excessive prices, the government may want to set up a regulator to change the market structure or permanently regulate the prices, but the antitrust authority should always refrain given the high risk of costly errors.

¹³ The super dominance concept has been explicitly recognised by in Point 136 of the Opinion of the Advocate General Fenelly in Joined Cases C-385/96P and C-396/96P *Compagnie Maritime Belge* [2000] ECR I-1365. The Court itself has never recognised the concept but refers several times to quasi or near monopoly: in *Compagnie Maritime Belge*; Case C-333/94P *Tetra Pak II* [1996] ECR I-5951, para 28-31; Case T-228/97 *Irish Sugar* [1999] ECR II-2969, para 185

Condition 2: The super-dominant position is due to current/past exclusive/ special rights or to un-condemned past exclusionary anticompetitive practices

Another important objection to the use of excessive price actions moved from the consideration that high prices and profits should be seen as the reward for firms' risky investments and innovations (and, which is the same, that it is the expectation of charging high prices and earning high profits which push firms to invest and innovate). Therefore, dominant firms should be treated in a different way according to the source of its market power and whether such power is due to their effort, business acumen, and risky investments, or is instead due to current or past protection and legal barriers or un-condemned past exclusionary anticompetitive practices.¹⁴ In our opinion, therefore, the *second necessary (but not sufficient) condition* for using excessive pricing actions in competition law, is that *the dominant position is due to current or past exclusive or special rights or un-condemned past exclusionary anticompetitive practices*.

Our second condition eliminates all those possible cases where entry barriers are high and non-transitory (that is, the first condition fulfils), but where the persistence of a monopoly situation is the result of innovations or investments made in the past. It is no mystery that the existence of large endogenous sunk costs, switching costs, and network effects might allow a firm to enjoy a dominant position over time.¹⁵ However, our second condition states that we should treat differently a firm which enjoys such a position because of risky investments made in the past or because of legal protection or un-condemned past exclusionary anticompetitive practices.

In the former case, which may well be the case of industries characterised by network effects, it is likely that the dominant firm is

¹⁴ Along the same line, Vickers (2005) arguing that the appropriate public policy towards firms with actual or potential market power depends on the cause of market power, and Röller (2007).

¹⁵ See for a discussion chapter 2 of Motta (2004).

the winner of a competition *for* the market, where there has been an earlier phase of the market characterised by low prices and a battle to win the market, followed by a phase where the market has tilted in favour of a firm, which then enjoys a dominant position. In such a case, high prices in the later phase of the market are part of the normal competitive process, and it is indeed what moved rivals to fight for the market in the earlier phases of it. Intervening with an excessive price action does not seem to be justified.¹⁶

In the latter case where the dominant firm has been sheltered from competition, it would be impossible to argue that high prices are the reward for past investments or efforts, and there would accordingly be the conditions for an excessive pricing action.

This second condition is divided in two alternative tests. Under the first limb of the test, the super-dominance should be caused by current or past legal barriers and access in the market has not been granted in a fair and non discriminatory way. Those barriers may be due to the scarcity of indispensable resources (like spectrum for mobile telephony services), to natural monopoly characteristics, or – more critically- to lobbying efforts to get legal protection and create an economically unjustified rent.

In this context, a particular and difficult case is whether an excessive price action may be taken in case of an Intellectual Property Rights. In most cases, IPR laws protect worthy investments made by a firm, which in exchange enjoys a monopoly over the product or process for a certain length of time. Allowing excessive price action would undermine the very object of those IPR. Thus, we think with Fletcher and Jardine (2007) that any good or service

¹⁶ Paulis (2007) proposes a much more lenient condition. He argues that antitrust excessive pricing actions should be possible in case of legal but also natural monopolies. It is only when determining whether the price is excessive that the authority should then take into account the investment risks. For us, given the many objections against excessive prices actions, the condition should be stricter.

protected by Intellectual Property Rights should in principle not be subject to an excessive prices action.

The problem of course is when the antitrust authority thinks that the IPR is not justified because there is no investment to protect. Even in those exceptional cases, we think that allowing an excessive price action is not appropriate given the high risk and cost of type I error (but an exclusionary abuse action may be appropriate because it carries lower risk and cost of type I error). At the minimum, we think that if the antitrust authority intervenes, it should prove, in addition to the excessive price, that the allocation of the IPR was manifestly unjustified.

Under the second limb of the test, the super-dominance should be caused by un-condemned past exclusionary practices. Those may be due to the fact that company did not had a dominant position when doing its anticompetitive practices (hence under EU law, the antitrust authorities could not intervene) or that antitrust authority commit a type II errors and did not intervene where it should have done. Röller (2007) speaks of “gap cases” and “mistake cases”¹⁷ respectively. However, analyzing whether the super-dominance was due to past exclusionary abuses should remain exceptional as it is extremely difficult to do.

Condition 3: No sector-specific regulator has jurisdiction to solve the matters

The two necessary conditions that we have identified so far (presence of high and non-transitory barriers; current/past exercise of special/exclusive rights or un-condemned past exclusionary anticompetitive practices) often apply to industries where there is a sectoral regulator. When this is the case, it is the regulator, rather

¹⁷ See also Paulis (2007) noting that “the fact that the EU statute does not prohibit the acquisition of dominance through unilateral abusive behaviour justifies a higher protection (than under US law) against direct exploitation of consumers by dominant firms.”

than the competition authority, which should be best placed for an intervention if competition does not work properly.

Nevertheless, in some cases there may be conflicts between the regulator and the competition authority, with the former being satisfied that prices are the 'right' ones and the latter arguing that they are too high. It would be difficult to say *a priori* who is right and who is not: the sectoral regulator may admittedly suffered a bias from a regulatory capture, but it may also have a longer-run perspective and see relatively high and stable prices as necessary to stimulate investments.

Such conflicts do occur, and are resolved in different ways across jurisdictions. For instance, in the US the prevailing view – after a more interventionist approach during the Seventies and the Eighties when Courts tended to show scepticism about the possibility that sectoral regulators would be able to constrain abusive antitrust practices on regulated firms – seems now to be that there is no additional role for antitrust intervention in industries where there is a sectoral regulator.¹⁸

The situation in Europe is very different because the competition law has a constitutional value that sector-specific regulation does not have and because the Commission may be tempted to use antitrust action to discipline and harmonise the actions of the national regulators.¹⁹ Thus to decide how the conflict should be resolved, two views are opposed.²⁰

Some argue that there is a need for a clear division of competences between antitrust and sectoral authorities to avoid

¹⁸ See *Verizon v. Trinko* 540 U.S. 398 (2004) and the discussion in Kovacic (2007),

¹⁹ The Commission has recently taken two decisions against telecommunication incumbents for anti-competitive price squeeze, although those incumbents were partly regulated by national regulators: Commission Decision of 21 May 2003, Case 37.451 *Deutsche Telekom*, O.J. [2003] L263/9; Commission Decision of 4 July 2007, Case 38.784, *Telefonica*.

²⁰ On this issue, see Geradin (2004).

multiple layers of intervention against dominant firms. Following that view, the Commission or the national competition authority should not take an antitrust case when the national regulator has decided to intervene or not to intervene. That does not mean that antitrust law may be violated by sectoral regulator. Indeed if it were the case, the Commission may open an infringement procedure against the Member State of the national regulator for violating EU competition law. Moreover, the exploited consumers, or national competition authority when permitted by national procedural laws, may appeal to the national regulator's decision before a national Court.

Others argue that competition between antitrust authorities and sector regulators may be good. Moreover, infringement procedures are relatively long (three to four years) and there is a need for efficient way to ensure that antitrust law is respected.²¹ Following that view, the Commission should intervene directly against the regulated dominant firm (provided the latter enjoys some margin of discretion within the regulatory limits imposed by the national regulator). However, this view is not fully convincing because when there is a disagreement between a competition authority and a sectoral regulator, one of the involved party has always an incentive to bring the matter before a Court. Thus, an antitrust decision will only delay the matter before it goes to the Court.

Thus we submit that in case of exploitative abuses (but not necessarily in case of exclusionary abuses), antitrust authority should abstain when a sectoral regulator has jurisdiction to act. At the minimum, we think that if the antitrust authority intervenes, it should prove, in addition to the excessive price, that the decision of the sectoral regulator was manifestly wrong.

²¹ Along those lines, Paulis (2007), Röller (2007).

Thus our *third condition to take an antitrust excessive price would be that there is no sectoral regulator having the jurisdiction to solve the matter.*²²

Comparison with the tests proposed so far

Thus the test we propose is less strict than the one of Evans and Padilla (2005) as we do not require that the excessive prices prevent the emergence of a new product or service. To us, this condition would be extremely difficult to implement and its restrictive role is not justified.

On the other hand, our proposed test is stricter than the one advocated by Paulis (2007) which focus only high and long lasting entry barriers and expansion. To us, this “qualified dominance” test is not sufficiently limitative given the importance of the risk and the cost of type I error as well as the scarce resources of the competition authorities that are often better allocated to exclusionary abuses.

Thus we are close to the test proposed by Röller (2007) or Fletcher and Jardine (2007) with one notable difference however. We think that if a sector regulator has the competence to intervene, there should be no antitrust intervention that would increase the regulatory burden on the dominant firms.

²² We take the existence of a sector regulator as exogenous. We think that the criteria to decide whether a regulator should be set up may be inspired by those that the Commission used to decide whether regulation is justified in the electronic communications sector: (1) high and non-transitory entry barriers, which may be of a structural, legal or regulatory nature, (2) no competition dynamic behind those barriers, (3) no efficiency of antitrust remedies to solve the market failures identified with the first two criteria: Article 2 of the Commission Recommendation of 13 November 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation.

2.3.4 The proposed screening test and the case law

It is worth asking to what extent our proposed screening test above fits with the existing EU practice on excessive prices. The answer can only be preliminary because the practice so far is very rare but, at this stage, our test describes well the characteristics of the markets in which the Commission and the Community Courts have adopted excessive price actions,

Up to now, the Commission has only adopted six formal decisions as it does not want to behave a price regulator.²³ Most of those decisions related to exclusionary abuse. *General Motors* and *British Leyland*,²⁴ dealing with the price of motor vehicle certificate, are about preventing parallel imports and intra-brand competition. *United Brands*, dealing with the price of bananas in several European countries, is about discriminatory pricing.²⁵ *Deutsche Post*, dealing with the price of some international mail, is about preventing re-mail companies to enter the market.²⁶ Thus few Decisions (Port of

²³ Vth *Commission Report on Competition Policy* (1975), para. 76; XXIVth *Commission Report on Competition Policy* (1994), para. 207: "(...) the existence of a dominant position is not in itself against the rules of competition. Consumers can suffer from a dominant company exploiting this position, the most likely way being through prices higher than would be found if the market were subject to effective competition. *The Commission in its decision-making practice does not normally control or condemn the high level of prices as such.* Rather it examines the behaviour of the dominant company designed to preserve its dominance, usually directly against competitors or new entrants who would normally bring about effective competition and the price level associated with it" (emphasis supplied); XXVIIth *Commission Report on Competition Policy* (1997), para. 77.

²⁴ Commission Decision of 19 December 1974, *General Motors*, O.J. [1975] L29/14; Commission Decision of 2 July 1984, *British Leyland*, O.J. [1984] L207/11.

²⁵ Commission Decision of 17 December 1975, *Chiquita*, O.J. [1976] L95/1.

²⁶ Commission Decision of 25 July 2001, *Deutsche Post II*, O.J. [2001] L331/40.

Helsingborg)²⁷ are about pure exploitative pricing. All those 6 Commission Decisions, except *United Brands*, relate to the existence of legal monopoly.

The Commission opened also several cases in the telecommunication sector.²⁸ They did not lead to formal decisions because the case was passed to the national telecom regulator when it had jurisdiction to act or otherwise settled between the Commission and the dominant operator.

The Court has decided about fifteen cases, more than the Commission because of the preliminary question from national Courts. Again, most of the cases related to exclusionary abuses and few cases (*Ahmed Saeed*, *Tournier (SACEM I)*, *Lucazeau (SACEM II)*, *Centre d'insémination de la Crespelle*)²⁹ are about pure exploitative prices. In all those cases, except *United Brands*, the dominant company enjoyed a legal monopoly or an IPR. More crucially, in all cases of pure exploitative abuses, the dominant company enjoyed a legal monopoly and there was no competence sector regulator.

Thus as Community judge Wahl (2007) observes: "the prohibition against excessively high prices has its primary scope of application in situations of legal monopolies or regulated markets. In free markets it may principally be used when the pricing strategy focuses on something other than exploiting its customers on that particular product, for example by trying to prevent parallel imports".

²⁷ Commission Decision of 23 July 2004, Case 36.570 *Sundbusserne v. Port of Helsingborg*, and Commission Decision of 23 July 2004, Case 36.568 *Scandlines Sverige AB v. Port of Helsingborg*.

²⁸ For a description of those cases, see our previous paper Motta and de Streel (2007:105-108).

²⁹ Case 66/86 *Ahmed Saeed* [1989] ECR 803; Case C-323/93 *Centre d'insémination de la Crespelle* [1994] ECR I-5077; Case 395/87 *Tournier (SACEM I)* [1989] ECR 2521; Cases 110, 241 & 242/88 *Lucazeau (SACEM II)* [1989] ECR 2811.

Interestingly, in other jurisdictions as well the same criteria have more or less explicitly been followed. In the *Harmony v. Mittal* South African case, the Tribunal took into account both the fact that Mittal's quasi-monopolistic position was not contestable (unlikely that entry would have occurred by exercising a constraint on Mittal's pricing policy) and that it had not been contested in the past (of recent privatisation, Mittal Steel South Africa is the new name of Iscor, the public monopoly in flat steel which has dominated South Africa for a very long time).³⁰

2.4 The standard of proof for the excessive pricing

2.4.1 Different possible tests to prove an excessive price

The next question is to understand how to recognise and prove an 'excessive' price in practice. To this effect, the Court has indicated that several methodologies may be used. In *United Brands*, the Court held that:

251. This excess could, *inter alia*, be determined objectively if it were possible for it to be calculated by making a comparison between the selling price of the product in question and its costs of production, which would disclose the amount of the profit margin (...).

252. The questions therefore to be determined are whether the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the affirmative, whether a price has

³⁰ For a discussion, see Roberts (2007), who also argues that market size characteristics matter when assessing the likelihood that entry may discipline a dominant incumbent. In a small and isolated country, it may be unlikely that new entry occurs in sectors characterised by large sunk costs. Similar remarks have been made in the past by Fingleton (2006), referring to Ireland.

been imposed which is either unfair in itself or when compared to competing products. (...)

253. *Other ways* may be devised – and economic theorists have not failed to think up several – of selecting the rules for determining whether the price of a product is unfair (emphasis supplied).

And indeed over time, the Court of Justice (and the European Commission) have made use of different methods to determine whether a price is excessive.³¹

A first method is based upon a *comparison between costs of production and prices*.³² The idea is that there should exist a threshold price which guarantees a sufficient margin with respect to costs, and that above such a threshold the price charged by a dominant firm would be excessive.

Of course, there are several difficulties with this approach. First, a competitive price is not only determined by supply-side factors (in particular the cost of production), but also by demand side factors (demand elasticity, willingness and ability to pay,...).³³

Second, the threshold price and the 'reasonable' margin over costs would be to a large extent arbitrary, and it is not clear how it should be fixed. Although the Court may have indicated in particular cases that a certain margin was reasonable and another was not, this should not be taken as a rule which holds across sectors. For instance, in sectors where fixed costs are very important relative to variable costs of production, one could not apply the same threshold margins as in sectors where the burden of costs falls upon variable ones.

³¹ For a detailed account of those methods, see Williams (2007).

³² This method was followed, for instance, in , Case 298/83 *CICCE* [1985] ECR 1105, paras. 24-25; Joined Cases 110, 241 & 242/88 *Lucazeau/SACEM (SACEM II)* [1989] ECR 2811; and Case 66/86 *Ahmed Saeed* [1989] ECR 803.

³³ This point has been explicitly recognised by the Commission in the recent *Port of Helsingborg* Decision, point 185.

Third, the calculation of the relevant costs is often problematic, for several reasons. (i) There are often divergences between accounting costs and economic costs because firms normally record cost in a way that is most useful for financial and tax purposes. (ii) Risk should be taken into account, hence an *ex post* high profit may in fact corresponds to a normal *ex-ante* return. (iii) When the dominant firm is a multi-product or multi-market firm, an additional difficulty lies in the allocation of common costs among the different products.³⁴ (iv) When the dominant firm is operating in a two or multi-sided market, the competition authority should consider the system price on all markets and not the price of a single market. In those markets, the side that conveys the most positive externalities on the others will naturally be “subsidised” by the other sides, who may then (wrongly) appear to pay an excessive prices.³⁵

Fourth, in some cases it is not even the actual costs of the dominant firm, but the costs of a hypothetical efficient firm which should be considered. In the *SACEM* cases,³⁶ the Court of Justice considered that the production costs to be taken into account are those of an efficient firm, and not necessarily those of the investigated firm which may have inflated production costs because of its dominant position (X-inefficiency). Indeed, the Court stated that a firm may not justify its unfair price with high production costs because the possibility may not be ruled out that it is precisely the lack of competition on the market in question that accounts for the high costs.

³⁴ In *Ahmeed Saaed* at Point 43, the Court of Justice provides that a competition authority may rely on the accounting methodology (in particular regarding the apportioning of common costs) used in sector regulation to determine whether a price is excessive.

³⁵ See for a discussion: Wright (2004)

³⁶ Joined Cases 110, 241 & 242/88 *Lucazeau/SACEM (SACEM II)* [1989] ECR 2811, para. 29. Based on empirical research, Röller (2007) argues that in the European airlines industry, the prices are excessive although the price-cost margins are “normal” because the costs (particularly the wages) are excessive.

Thus assessing production costs is a difficult exercise even for sectoral regulators which have a deep knowledge of the industry, let alone for Competition Authorities or Courts which have a much more imperfect knowledge of the sector. Moreover unlike predatory pricing cases, where there is at least a substantial convergence on which particular cost measures should be taken into account when carrying out price/cost tests,³⁷ neither the doctrine nor the case law offer much guidance on the relevant cost measures to be analysed.

A second method to prove excessive pricing is based upon a *comparison between prices charged by the dominant firm in different markets*.³⁸ Suppose for instance that it was established that the firm sets a price in market A which is well above the price it sets for the same (or comparable) product and service in market B, and that in the latter market the firm is profitable. Then this can be considered as proof of unfair pricing. Furthermore, it could even be considered as a discriminatory abuse, prohibited under Article 82(c) of the EC Treaty.

Note that under this method *de facto* discriminatory pricing and unfair pricing coincide, something that economists would find it difficult to approve of. We know there are several reasons why firms might want to set different prices in different markets (production or distribution costs as well as consumer demands or market structures, may differ), and that there is little justification from the point of view of economic efficiency to establish that price discrimination by a dominant firm might be *per se* prohibited. Economic theory³⁹ suggests that even if price discrimination was done by a

³⁷ (1) Price below average variable costs or (2) price below average total cost but above average variable cost with evidence of an exclusionary plan are considered as predatory: Case C-62/86 *Akzo* [1991] ECR I-3359, para 71 and Case C-333/94P *Tetra Pak II* [1996] ECR I-5951, para 44.

³⁸ This method was followed, for instance, in , Case 26-75 *General Motors* [1975] ECR 1367 and Case 226/84 *British Leyland* [1986] ECR 3263, para. 28.

³⁹ See the discussion in Chapter 6 of Motta (2004) and Swedish Competition Authority (2005).

monopolistic firm, it would not necessarily be welfare detrimental, as price discrimination might increase sales and allow for consumption by people who would not otherwise buy the product. Also, it may be an efficient way to recover fixed costs of investments and innovations. Furthermore, in a market where the dominant firm is facing competition (that is, when it does not have monopolistic or quasi-monopolistic power), prohibiting price discrimination would amount to chill competition.

A third method to prove excessive pricing, the so-called benchmarking, consists of a *comparison between the prices charged by the dominant firm and those charged by other firms, either (i) in the same market, or (ii) in other market.*

The variant (i) in this method involves comparing the price charged by the dominant firm and those charged by competitors in the same relevant market.⁴⁰ This test involves some difficulties. Firstly, the very fact that in the same relevant market there are other firms offering the same product or service suggests that entry in the market is possible, and that competitive forces may possibly erode the dominant position over time. Secondly, the fact that the dominant firm can command a higher price than the rivals for products which belong to the same relevant market may simply be the effect of a higher perceived quality of the dominant firm's product. To the extent that this superior quality is the result of past innovations and investments, particular caution should be made to avoid penalising a firm for having innovated and invested.

The variant (ii) of this method involves comparing the price charged by the dominant firm in the relevant market with prices arising in other markets which operate in competitive conditions.⁴¹ This method has been used by the Commission to compare prices among different EU countries and boost the internal market with

⁴⁰ This method was used in , Case 24/67 *Parke, Davis* [1968] ECR 55, Case 53/87 *Renault* 53/87 [1988]

⁴¹ This method was used in Case 78/70 *Deutsche Grammophon*, [1971] ECR 487; Case 30/87 *Bodson* [1988] ECR 2479.

antitrust actions. Here, as well, caution should be used in order to avoid that unduly inferences are taken from the fact that one is comparing markets that operate under very different conditions of costs and demands.

A fourth method consists of concentrating *on the profits of the dominant firm and comparing such profit either with (i) a normal competitive profit or (ii) the profits of other firms*.⁴²

The variant (i) considers a product's price excessive when the firm's return on capital for that product is greater than its weighted average cost of capital (WACC). However this approach, which has been used by some national competition authorities,⁴³ is fraught with conceptual difficulties (accounting profit reflect economic profit only in very specific, and often unrealistic, assumptions) and practical difficulties (vulnerability to accounting complications).

The variant (ii) compares the profit rates of the dominant firm to the profits obtained by similar companies in other geographic markets.⁴⁴ The practical application of such approach is also very difficult as it is almost impossible to find a relevant comparator.

2.4.2 A proposed standard of proof rule: the convergence of indicators

Since excessive pricing actions should be taken only in exceptional circumstances and since all the methods to prove a case have some weaknesses, it is recommendable that antitrust authorities and courts should carry out excessive pricing tests according to as many of the methods indicated above as possible. In other words, the authorities should look for robust evidence that prices are indeed excessive.

⁴² See OXERA (2003).

⁴³ For a description of those cases, O'Donoghue and Padilla (2006:629-631).

⁴⁴ This approach has been considered by the Commission in the *Port of Helsingborg* Decision but was not followed because of the insuperable difficulties in establishing valid benchmarks (see Point 156).

They should not limit themselves to a mere comparison between prices or prices and costs, but should instead complement it with a deep investigation of the market and of the reasons why prices may diverge or be considerably above the competitive level. In any case, authorities should drop the case if different tests provide different results or if the price does not deviate significantly from the different used benchmarks.⁴⁵

2.4.3 The proposed standard of proof rule and the case-law

The recent practice in the EU is in line with this recommendation. In the recent *Port of Helsingborg* Decisions,⁴⁶ the Commission rejected a complaint of excessive price arguing that a mere cost-plus approach was not sufficient to prove an excessive price. In this case, the ferry-operations fees charged by the Port of Helsingborg to the complainant were above their costs, but were not unfair when compared with the fees charges by the Port to other users than the complainant (there was no discrimination) or when compared to fees charged by other similar Ports. The Commission also considered that some demand-side elements (like the premium that customers would be ready to pay for the unique service offered by the Helsingborg port) should be taken into account when proving an excessive price.

Similarly in the UK, the Competition Appeal Tribunal endorsed the Office of Fair Trading *Napp Pharmaceutical* Decision because it resorted to a number of tests (which can be reconduced to the

⁴⁵ Also Paulis (2007) arguing that only very large deviations from competitive conditions may be indicative of abusive pricing and O'Donoghue and Padilla (2006:619).

⁴⁶ Commission Decision of 23 July 2004, Case 36.570 *Sundbusserne v. Port of Helsingborg*, and Commission Decision of 23 July 2004, Case 36.568 *Scandlines Sverige AB v. Port of Helsingborg*.

general methods indicated above) to prove that the pharmaceutical company had engaged in excessive pricing.⁴⁷ Conversely in *Attheraces*, the Court of Appeal overturned a judgment of the Chancery Division that proved an excessive price on a mere cost-plus basis and that did not take into account the value of the good to the buyer.⁴⁸ In *Veraldi/Alitalia*, the Italian Autorità Garante della Concorrenza e del Mercato also resorts to different methods, but to arrive at the conclusion that there was insufficient evidence that Alitalia had charged excessive prices on the route between Milano and Lamezia Terme.

Finally, there is an important legal point to clarify. Some commentators (including Commission officials and Community judge)⁴⁹ argue that that Court of Justice imposed in *United Brands* (Point 252 mentioned above) a cumulative two-stage test to prove an excessive price: (1) the price should be above the cost, and (2) this price-cost margin should be either excessive in itself or by comparison to competitors' products. This is also the approach followed by the Commission in its *Port of Helsingborg* Decision. Thus those commentators disagree with the view that we, among others,⁵⁰ defended in our 2006 paper. For us, the test imposed by the Court is not necessarily cumulative and both parts of the test aimed to prove the same thing: that a price is above its competitive level.

To clarify our view, we think that the Court is extremely pragmatic in its standard of proof. It requires a price-cost analysis

⁴⁷ Competition Appeal Tribunal Decision of 15 January 2002, Case 1001-1/1/01 *Napp v. DGFT*

⁴⁸ Court of Appeal Decision of 5 February 2007, Case A3/2006/0126 *Attheraces Limited v. The British Horseracing Board Limited*.

⁴⁹ Esteva Mosso et al. (2006:399), O'Donoghue and Padilla (2006:611), Wahl (2007).

⁵⁰ Like Gal (2004).

when it is feasible and otherwise requires other indicators.⁵¹ Thus the Court does not impose price-cost analysis in all cases, but more pragmatically suggest relying to several different indicators to prove excessive prices. As mentioned by Green (2006: 90), “the more comparable which, in a given case, are used the more likely it is that the Courts will, on appeal, accept any inferences which are drawn from comparisons that the prices under review are abusive.”

2.5 The choice of the most efficient remedy

The last issue to address when dealing with excessive prices is the choice of the best remedy. Often, excessive price abuse is associated with price regulation remedy. However, the two questions should be kept separate as other remedies exist. More critically, price regulation is not always the most efficient remedy to deal with excessive prices. On the one hand, price regulation may highly distort investment incentives and is difficult to implement. On the other hand, excessive price reflect more a problem in the structure of the market than in the behaviour of the firm, hence the appropriate remedy should change the market structure for the future and not punish the firm for the past. Thus, the choice for the best remedy (or the most proportionate remedy according to the European competition law),⁵² will always depend on the cause of the excessive pricing. Thus it is only as a last resort remedy, that price regulation should be imposed.

If the excessive price is due to a combination of strong past market power and consumer inertia (as it is often the case in newly

⁵¹ At Point 253 of *United Brands*, the Court explicitly recognised that, to prove an excessive price, there are other ways than price-cost comparison. In *SACEM II* and *Bodson*, the Court recognised that a price cost comparison would be impossible given the nature of the product.

⁵² Article 7 of the Council Regulation 1/2003.

liberalised sectors), the best remedy may be to encourage consumers switching towards less expensive offers of new entrants, providing them with more comparable information.

If the excessive price is due to important strategic entry barriers, the best remedy would be to remove and prohibit such entry barriers. For instance, price may be excessive and competition may not work because of important artificial switching costs created by a dominant firm (think for instance of frequent-flyer programmes which helped incumbent airlines at the beginning of liberalisation, or of the large fees required by the Italian banks to close bank accounts). In such cases, a competition authority may want to solve the problem at its roots by asking for the removal of artificial switching costs (opening the frequent-flyer programme to entrants, scrapping fees for closing bank accounts). Similarly, excessive prices may be due to externalities caused by particular price structures (for instance, in the mobile telecommunication sector, high termination rates may be due to the externality imposed by receivers on callers). In such case, the appropriate remedy is partly applying a receiver-pays principle.⁵³ Note that those cases are more about exclusionary abuses than exploitative abuses.

If the excessive price is due to important structural entry barriers, the competition authority should try to remove the entry barrier. When the barrier is of legal nature, the authority should use its advocacy power and persuade governments to remove those legal barriers and effectively liberalise the sector. When the barrier is of economic nature, the competition authority may impose vertical restructuring, by separating the key stages of production at which scale economies are the most important.

⁵³ Arguably, though, such interventions may take time and may not necessarily be a substitute, but rather a complement to excessive pricing actions, in the sense that the latter may provide a credible threat that a competition authority may use in order to persuade industry and government to accept or enforce the necessary changes.

2.6 Which Guidelines for excessive pricing?

The European Commission will soon propose guidelines for Article 82 EC, including excessive prices. Those guidelines will not only guide the practice of DG-Competition but also, and more importantly because they have less experience and are often less prepared, the practice of the Member States' National Competition Authorities and possibly the National Courts' judges.

It is important that in those guidelines, the Commission commits itself to limit the use of its broad legal power and make explicit that excessive pricing actions should be an option of last resort for antitrust authorities,⁵⁴ and that they should be used only when other routes fail. Hopefully, the guidelines will deal with three issues: a test to screen the markets that are candidates for intervention of excessive pricing actions (to provide safe harbour for the firms), the standard of proof of such actions, and the proportionate and most efficient remedy to impose.

The screening test should contain three cumulative conditions. The first condition is the existence of high and non-transitory barriers. It tells us that it is only "super-dominant" or "quasi-monopolistic" firms which should be the object of excessive price actions. A dominant firm which has, say, 50-60% of the market, is a firm which does have competitors and therefore operates in a market where entry is possible (since it has occurred). In our view, guidelines should explicitly exclude the use of Article 82(a) EC to firms which have, say, less than 80% of the market.

The second condition suggests to limit action in those sectors where the quasi-monopolistic position has been achieved through

⁵⁴ The Director General of DG Competition noted recently that : "There was a strong consensus on relatively limited conditions under which Article 82 could be used for exploitative conduct (...) There was equally a recognition on both the EU and US side that sectoral regulation can sometimes be quicker and more effective than long, drawn-out antitrust investigations": Lowe (2007).

special and exclusive rights or to un-condemned past exclusionary anticompetitive practices rather than market competition. Accordingly, firms should be reassured that whenever they derive their position from risky investments, they will not be deprived of the benefits of their investments.

The third condition is that there is no sectoral regulator having the jurisdiction to solve the matters. Indeed when a regulator has jurisdiction, it should intervene and if it fails to do so, the Commission or the national competition authority should not condemn the dominant firm but open an infringement procedure against its Member State.

Then with regard to the standard of proof, the competition authority should rely on a convergence of indicators to show excessive prices, complemented by a deep investigation of the market structure and the reasons why prices may be above their competitive level.

Finally, the antitrust authority should choose the most efficient means to solve the excessive price problem and relate remedy to the cause of market power. Thus it should address demand side problems and activate competition in the market, and only rely on price regulation on a last resort.

References:

- Bergman, M. ed. (2005), *The Pros and Cons of Price Discrimination*, Swedish Competition Authority.
- Esteva Mosso C., Ryan S.A., Albaek S., Tierno Centella M.L. (2006), *Article 82*, in Faull and Nikpay (eds), *The EC Law of Competition*, Oxford University Press, 313-420.
- Evans D.S., Padilla A.J. (2005), *Excessive Prices: Using Economics to Define Administrative Legal Rules*, *Jour. of Competition Law and Economics* 1(1), 97-122.
- Fingleton J. (2006), *De-monopolising Ireland*, in Ehlermann and Atanasiu (eds), *European Competition Law Annual 2003: What is an Abuse of a Dominant Position?*, Hart, 53-68.
- Fletcher A., Jardine A. (2007), *Towards an Appropriate Policy for Excessive Pricing*, in Ehlermann and Marquis (eds), *European Competition Annual 2007: A reformed Approach to Article 82*, forthcoming.
- Gal M. (2004), *Monopoly Pricing as an Antitrust Offence in the US and the EC: Two Systems of Belief About Monopoly?*, *Antitrust Bulletin*, 33.
- Geradin D. (2004), *Limiting the Scope of Article 82 of the EC Treaty: What can the EU learn from the US Supreme Court's Judgement in Trinko in the wake of Microsoft, IMS, and Deutsche Telekom?*, *Common Market Law Rev.* 41(6), 1519-1553.
- Green N. (2006), *Problems in the identification of excessive prices: The United Kingdom experience in the light of Napp*, in Ehlermann and Atanasiu (eds), *What is an abuse of a dominant position?*, Hart, 79-90.

- Kovacic W. (2007), *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago-Harvard Double Helix*, Columbia Business Law Review, 1-82.
- Lowe P (2007), *Concluding Remarks*, in Ehlermann and Marquis (eds), *European Competition Annual 2007: A reformed Approach to Article 82*, forthcoming.
- Lyons B. (2007), *The Paradox of the Exclusion of Exploitative Abuse*, in Fredenberg and Strand (eds), *The Pros and Cons of High Prices*, Swedish Competition Authority.
- Motta M. (2004), *Competition Policy: Theory and Practice*, Cambridge University Press.
- Motta M., de Streel A. (2006), *Excessive Pricing and Price Squeeze under EU Law*, Ehlermann and Atanasiu (eds), *European Competition Law Annual 2003: What is an Abuse of a Dominant Position?*, Hart, 91-125
- O'Donoghue R. and Padilla A.J. (2006), *The Law and Economics of Article 82 EC*, Hart.
- Paulis E. (2007), *Article 82 EC and Exploitative conduct*, in Ehlermann and Marquis (eds), *European Competition Annual 2007: A reformed Approach to Article 82*, forthcoming.
- OXERA (2003), *Assessing profitability in competition policy analysis*, OFT Economic Discussion Paper 6.
- Roberts S. (2007), *Assessing excessive pricing – the case of flat steel in South Africa*, Mimeo

- Röller L-H. (2007), *Exploitative Abuses*, in Ehlermann and Marquis (eds), *European Competition Annual 2007: A reformed Approach to Article 82*, forthcoming.
- Van der Woude M. (2007), *Unfair and Excessive Prices in the Energy Sector*, in Ehlermann and Marquis (eds), *European Competition Annual 2007: A reformed Approach to Article 82*, forthcoming.
- Vickers J. (2005), *Abuse of market power*, *Economic Journal* 115, F244-F261.
- Wahl N. (2007), *Exploitative high prices and European competition law – a personal reflection*, Fredenberg and Strand (eds), *The Pros and Cons of High Prices*, Swedish Competition Authority.
- Williams M. (2007), *Excessive Prices*, Fredenberg and Strand (eds), *The Pros and Cons of High Prices*, Swedish Competition Authority.
- Wright J. (2004), *One-sided Logic in Two-sided Markets*, *Review of Network Economics* 3(1), 44-64.

3 **Exploitative high prices and European competition law – a personal reflection¹**

Nils Wahl

3.1 Introduction

Article 82 of the EC Treaty applies according to its wording both to exclusionary abuse and exploitative abuse. In fact, given its wording, it would seem as if it is primarily concerned with exploitative abuse. On the other hand, it is clear from case law and Commission decisional practice, that the enforcement policy up until today has had its focus on exclusionary abuse.² However, with the 2004 reform of the competition rules it would seem fair to envisage a more extensive national application of the Community competition rules, which in turn could lead to an increase in the application of Article 82 to exploitative abuses. For example, and given the theme of this conference, it could not be ruled out that national enforcement agencies would increase their efforts to strike down on what they consider to be exploitative high prices. If doing so it is clear that they are under an obligation to respect the interpretation of Article 82 given by the Court of Justice. From that point of view there is an evident need of understanding what the Court of Justice has said, under what circumstances and for what reasons. This contribution

¹ Nils Wahl, judge at the Court of First Instance, Luxembourg. Views expressed are – as indicated in the title – personal. I am indebted to John Davies, Chief Economist, Competition Commission, UK, and Professor Sten Nyberg, Stockholm University, for useful comments on earlier drafts.

² The EC Law of Competition, second ed. (Faull & Nikpay eds.), Oxford 2007, p. 398.

therefore seeks to analyse case law generally considered to lay the foundation for the Community rules on exploitative high prices in contravention of Article 82.

3.2 Different forms of actions before the Court of Justice

The Community legal system is built on a division of competencies between the Court of Justice (and the Court of First Instance) on the one hand and national courts on the other. Case law concerning exploitatively high prices reflects this division of competencies.

According to Article 220, EC Treaty, the Court of Justice interprets and applies the Community legal rules. The Court fulfils its tasks principally (and of interest here) by means of two different forms of action. Under Article 234, EC Treaty procedure the Court of Justice has the competence to interpret the Treaty as well as to interpret and rule on the validity of for example Commission decisions. Thus, national courts which are seized with a question of interpretation of the Treaty or the interpretation or validity of a Community act have a right and sometimes an obligation to ask the Court of Justice for a preliminary ruling. After the Court of Justice has given its interpretation, it is for the national court to apply that interpretation to the facts of the case. More practically, this means that the Court of Justice's interpretation might be more or less well connected to the actual facts of a case. Seen from the point of view of being able to pronounce principles of law – without thereby necessarily having to be certain of that particular principle's application to the case at hand – the preliminary reference system is well designed.³ It also implies that national courts on occasion have to supplement a particular principle with a more concrete content.

³ See for just one example of this; judgment of 19 November 1991 in case C-6/90 and C-9/90 *Francovich and Others v. Italy* [1991] ECR I-05357, and

The other form of action is the so called direct action under Article 230, EC Treaty. According to this, natural and legal persons have the right to challenge a decision addressed to them or a decision, which although in the form of a regulation or a decision addressed to another person, is of direct and individual concern to them. When dealing with such cases the community courts shall review the legality of the act in question. It is thus not a review of the suitability of the underlying policy choices as such, but only a review of the legality of the act. Although this does not imply a superficial review, it should be recalled that when it comes to complex matters of economic policy the Community courts review is limited to verifying that no manifest errors of assessment have been committed, thus basically leaving the question of policy to the Commission.⁴ Only as concerns fines do the Community courts have unlimited jurisdiction.⁵

Some of the cases discussed below are preliminary references and some others are direct actions. As concerns those cases that are preliminary references it follows from what has been said that the Court of Justice need not be concerned with questions of fact and whether these are proven or not. This is of course not to say that the Court is indifferent to the facts, but simply that the assessment of the facts is the responsibility of the refereeing national court. Obviously this will have an impact on the reasoning of the Court. On the other hand and when it comes to direct actions, the Community courts are of course much more concerned with facts in order to be able to rule on the validity, while not necessarily interfering with the policy

judgement of 9 November 1995 in case *C-479/93 Francovich v. Italy* [1995] ECR I-03843.

⁴ Judgment of 11 July 1985 in case *42/84 Remia e.a. v. Commission* [1985] ECR 2545, p. 34, judgment of 17 November 1987 in cases *142/84 and 156/84 BAT and Reynolds v. Commission* [1987] ECR 4487, p. 62, and judgment of 2 October 2003 in case *C-194/99 Thyssen Stahl v. Commission* [2003] ECR I-10821, p. 78.

⁵ Article 229, EC Treaty, and Article 31, Council regulation 1/2003.

choices made by the Institution in question. However, the interpretation of the Treaty is the exclusive competence of the Court of Justice.

Although it could not be said that a statement by the Court of Justice is more important than another based upon under which form of action the statement is made, it would seem imperative to have an understanding of the limitations of each form of action. It would likewise seem important to briefly recapitulate the situation as concerns the burden of proof and standard of proof in the Community competition law. Here it should be recalled that it is for the one claiming an infringement of Articles 81 and 82 to prove to the *requisite legal standard* that an infringement has been committed, while it is for the one claiming an exemption to prove the existence of that. It is also often assumed that recital 5 of Regulation 1/2003 also covers situations as concerns Article 82 in the sense that the one claiming that a particular behaviour was objectively justified has to prove that, thus it would not be for the other party to prove the absence of any objective justification.⁶

3.3 The prohibition against unfairly high prices

Article 82 prohibits abuse of a dominant position. Consequently, the fact that you are dominant is not in itself in contravention to Article 82. According to Article 82 (2) (a) an abuse may consist of directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions. A price can in principle be unfairly high or unfairly low. Unfairly low prices, which are often referred to as *predatory prices*, will not be dealt with further in this article but only unfairly high prices. An unfairly high price may have the effect of excluding competitors from the market, or it may have the effect of exploiting the customers of the dominant company. Only unfairly

⁶ The EC Law of Competition, second ed. (Faull & Nikpay eds.), p. 95.

high or excessive prices exploiting the customers of the dominant undertaking will be dealt with in this article.

When looking at the prohibition against unfair prices, here referred to as excessively high prices, it has to be kept in mind that prices generally fluctuate in a market depending on the degree of competition in that particular market. Obviously, the *competitive price*, i.e. the price often referred to as the basis for any comparison of excessively high prices, cannot be expected to be found in all markets. Depending on the competitive situation in the market the price will be higher than the competitive price up until the *monopoly price* in those situations where we are looking at a legal or de facto monopoly. Normally, one would expect a higher price the more concentrated the market. In fact it would seem to me that one should expect the *monopoly price* in all those situations where we are looking at a monopoly. The monopoly price is here described as the price at which the monopolist (or the dominant firm) earns the most. For any higher price than the monopoly price, the monopolist would lose sales in excess of what he would gain by the price increase.

Considering the potentially substantial difference between the competitive price and the monopoly price, and the fact that there are no economic reasons for a monopolist or any dominant firm to charge a higher price than the monopoly price, one would expect that the prohibition against excessively high prices in Article 82 would refer to prices in excess of the competitive price but less than, or equal to the monopoly price. However, if the prohibition would catch also monopoly prices it would seem clear that Article 82 would be concerned not only with abuse of a dominant position, but also with the fact of someone being in a dominant position as such. If it is logical and expected from an economic point of view that the market conditions, that is the competitive conditions, have an influence over the market price it would seem natural to expect a monopolist to charge the monopoly price. Interfering with such a pricing policy would be tantamount to interfere with dominance as such. So then, when is a price excessively high?

3.4 Case law concerning unfairly high prices

3.4.1 Introduction

A presentation of case law concerning excessive prices could of course be structured in many different ways and perhaps the most obvious one would be to start with the leading case in this area, *United Brands v. Commission*⁷. However, since one of the ideas of this submission is to focus on under which circumstances statements have been made, case law will be presented mainly with regard to factors which in my view have had an influence on the outcome of the case.

3.4.2 Excessive pricing and other policy goals of the Community

In two cases from 1975 and 1986 respectively, two car producers General Motors⁸ and British Leyland,⁹ were accused of having abused their dominant position when it came to the pricing of technical inspections and issuing of certificates of conformity. In both cases the car manufacturers held a legal monopoly on the issuing of certificates of conformity and according to the Commission the two companies had abused their dominant position by charging excessive prices. The Court of Justice, to which the decisions by the Commission were appealed, held that it was an abuse to impose a

⁷ Judgment of 14 February 1978 in *Case 27/76 United Brands Company v. Commission* [1978] ECR 207.

⁸ Judgment of 13 November 1975 in *case 26/75 General Motors v. Commission* [1975] ECR 1367.

⁹ Judgment of 11 November 1986 in *case 226/84 British Leyland v. Commission* [1986] ECR 1347.

price which is excessive in relation to the economic value of the service provided, and which has the effect of curbing parallel imports by neutralizing the possibly more favourable level of prices applying in other sales areas in the Community, or by leading to unfair trade in the sense of Article 8[2] (2) (a).

By similar reasoning the Court also condemned the prices charged in the British Leyland case as "*clearly disproportionate to the economic value of the service provided and that that practice constituted an abuse by BL of the monopoly it held by virtue of the British rules*". In both cases the Court of Justice clearly stated that it would be an abuse of a dominant position to charge a price which was disproportionate to the economic value of the product or service. Respectfully, it is however submitted that a reference to the economic value of a service or product is not self-explanatory. In essence, the economic value of something would rather seem to be decided by the market. Only if one would connect the economic value to something else, such as the cost of production, etc., could it be said that we are looking at a method of calculating excessive prices. However, given the different cost structures within different industries (as concerns for example different forms of intellectual property) it would seem that a reference to costs (no matter how they are defined) is not self-explanatory either.

In the two cases it would seem clear that the car manufacturers charged a price in excess of the monopoly price as defined above. The reason for charging such a high price was, as explained in the judgments, an interest in making parallel importation into Great Britain more difficult, something that would partition the Common Market and be contrary to Article 28 (ex Article 30, EC Treaty). In my view it would seem clear that the Court's references to excessive prices are best explained with reference to these two facts. First of all it was clear that the car producers had legal monopolies as to the issuing of certificates of conformity. Normally, such a situation should have led to the charging of the monopoly price, but in these cases the manufacturers charged a price in excess of that, for the simple reason that they were not interested in selling certificates. The manufacturers' preoccupation would thus have seemed to be

motivated by the possibilities of preventing parallel trade in cars. In view of this it is hardly surprising that the Court of Justice upheld the Commission's decisions, but it is submitted that these two cases may not be taken as proof that the Court has interfered in a free market where the dominant actor charges excessively high prices. In fact, and as discussed above, a statement that it is an abuse to charge prices which are excessive as compared to the economic value is in itself not self-explanatory.

3.4.3 Excessive prices and preliminary rulings

It is not only in relation to direct actions that the Court of Justice has made statements concerning excessively high prices. In fact, statements concerning excessive prices would seem to be more frequent when it comes to preliminary rulings. In these cases the companies accused of having abused their dominant position by charging excessively high prices have often had a legal monopoly and the statements by the Court of Justice concerning the abuse are often of a declaratory nature. That statements are of a declaratory nature is of course not to say that the statement should not be considered important, since the declaratory nature follows from the procedure as such. Having said this, it is however clear that there is no actual finding of an abuse by the Court of Justice, but the question is more often than not referred to the national court responsible for finding out the facts of the case.

In the preliminary reference *Bodson/Pompes funèbres des régions libérées*¹⁰ from 1988 the Court of Justice had to deal with a legal monopoly allegedly charging excessively high prices for funeral services. Even though the Court of Justice did not possess any information that would give it the possibility to rule explicitly on the question, the Court stated that whether a price was excessively high could be judged by a comparison between the prices charged where

¹⁰ Judgment of 4 May 1988 in Case 30/87 *Bodson* [1988] ECR 2479.

there was a legal monopoly, or an exclusive right, and prices charged elsewhere. From the statements of the Court, or for that matter from the facts of the case, it is not clear to what extent the case deals with exploitative high prices or exclusionary high prices. In accordance with the two previous cases, which were direct actions under Article 230, also this case concerned a situation in which the dominant undertaking had a legal monopoly or an exclusive right.

In another demand for a preliminary reference, *Ahmed Saeed Flugreisen*¹¹ from 1989, the Court of Justice had to deal with what was called excessively high prices for air fares. The Court made some references to excessively high or excessively low prices, i.e. exploitatively unfair pricing or exclusionary unfair pricing¹², but these references do not seem to add very much to the concept of exploitative high prices or the method to be used for assessing excessively high prices.

In the preliminary reference of *Merci Convenzionali Porto di Genova*¹³ from 1991, the Court of Justice had to assess the pricing practices of a dock-working company having an exclusive right to dock-work in the harbour of Genoa. The case is interesting mainly because the Court of Justice is fairly explicit as to what it considers to be prohibited pricing policies. On the other hand, the case is not clear since it does not concern the dominant undertaking as such but rather the Member State which was suspected of having infringed Article 86 (formerly Article 90). Even though the case dealt with the responsibility of the member states not to distort competition it is interesting to note that the Court of Justice in paragraph 19 classifies demands for payment for services which have not been requested, the charging of disproportionate prices, the refusal to have recourse

¹¹ Judgment of 11 April 1989 in *Case 66/86 Ahmed Saeed Flugreisen* [1989] ECR I-803.

¹² *Ibid.*, p. 42.

¹³ Judgment of 10 December 1991 in *Case C-179/90 Merci convenzionali porto di Genova* [1991] ECR I-5889.

to modern technology, which involves an increase in the cost of the operations, and finally price reductions to certain consumers while at the same time offsetting such reductions by increasing the charges to other consumers, as an abuse of a dominant position. Even though such practices would seem more commonplace in situations of legal monopolies they could also be practiced by dominant firms not protected by a legal monopoly.

Although not explicitly referring to unfair, or excessively high, prices in its reasoning it would seem clear that that is what the Court of Justice, at least in part, is referring to. Even so the statements by the Court are not that clear or unequivocal to give an indication to the precise methods to be used to assess whether a certain pricing strategy is prohibited or not.

Generally, when speaking about excessively high prices, the Court of Justice normally makes reference to the alleged economic value of a certain product or service, so also in the preliminary reference *Crespelle*¹⁴ from 1994. In this case insemination centres with exclusive rights to carry on business within a certain geographical area were accused of having charged "*exorbitant prices*".¹⁵ According to the Court of Justice it would be an abuse of a dominant position if a company which holds an administrative monopoly charges fees for its services which are disproportionate to the economic value of the service provided.¹⁶ Interestingly enough the Court of Justice also stated that it was not an abuse of a dominant position to charge an extra fee to users who requested semen from production centres in other member states, provided that those costs were actually incurred by the insemination centres in meeting the requests of those users.¹⁷ It is noteworthy that while making reference to the economic

¹⁴ Judgment of 5 October 1994 in *Case C-323/93 Centre d'insémination de la Crespelle* [1994] ECR I-5077.

¹⁵ *Ibid.*, p. 19.

¹⁶ *Ibid.*, p. 25.

¹⁷ *Ibid.*, p. 27.

value of the products in question the Court of Justice also makes sweeping references to the costs of production. In fact, it would seem that if one were to compare prices in order to establish excessively high prices such a comparison would be less accurate if not taking into account costs.

This far in the presentation (with full knowledge that I this far have left out the most famous case, *United Brands* from 1978), there is really not much in the Court's case law to explain the concept of excessively high prices and how these should be calculated. However, two of the often considered more clear examples of excessively high exploitative prices are the preliminary references of *SACEM*¹⁸ and *Tournier*¹⁹, both decided on the same day in 1989.

The *SACEM* and *Tournier* cases dealt with the allegedly excessive prices charged by performing rights societies. In these two cases the Court of Justice stated that in order to find out whether or not prices were excessively high it was possible to make a comparison with similar prices in other member states. If the prices charged in one state were appreciably higher than those charged in other member states and where a comparison of the fee levels has been made on a consistent basis, that difference must be regarded as indicative of an abuse of a dominant position as the Court of Justice explained in paragraph 38 of *Tournier* and paragraph 24 of *SACEM*. Having established such a difference it would be for the undertaking in question to justify the difference by reference to objective dissimilarities between the two situations.

A comparison of prices with other markets or other operators is of course something that could indicate unfair prices, or at least different prices. The problem would, however, seem to be making sure that the comparison is made on a consistent basis. To a certain extent different prices might reflect different costs of production or other differences.

¹⁸ Judgment of 13 July 1989 in joined Cases 110/88, 241/88 and 242/88 *Lucazeau (SACEM)* [1989] ECR 2811.

¹⁹ Judgment of 13 July 1989 in Case 395/87 *Tournier* [1989] ECR 2521.

In a preliminary reference from 2000, *Deutsche Post*,²⁰ the task of making comparisons was far simpler than would normally seem to be the case. The public undertaking Deutsche Post, having a legal monopoly for distributing mail in Germany, had noticed what it considered was large amounts of so called re-mailing. In order to curb this re-mailing Deutsche Post charged the re-mailed post the full tariff for internal mail in Germany, which meant that the companies in question not only had to pay the international tariff applicable in the country from which the mail was sent but also the internal tariff in Germany. Considering that the conduct by Deutsche Post actually had the effect that the companies had to pay twice for the same service (without being able to deduct the first fee) the Court of Justice had no problems qualifying this as an abuse of a dominant position. Although not making explicit reference to a comparison it would seem evident that the Court of Justice compared the prices for ordinary internal mail with the situation in the case, thereby finding excessive prices. Once again it may be noted that the Court took into account the costs for delivering the mail as compared to the extra fee.²¹

Besides the cases now analyzed there are also other cases in which the Court of Justice refers to unfair prices and concludes that excessive prices are contrary to Article 82. One such example is a preliminary ruling from 1997 *GT-Link*²² in which case the Court of

²⁰ Judgment of 10 February 2000 in joined Cases C-147/97 and C-148/97 *Deutsche Post* [2000] ECR I-825.

²¹ It should be noted that the English version of the relevant passage (point 58) is not very accurate. In French it is stated: *Dès lors, l'exercice du droit, par une telle entité, de réclamer le montant intégral des taxes intérieures, sans tenir compte de la compensation entre les frais relatifs à l'acheminement et à la distribution d'envois déposés en grande quantité auprès des services postaux d'un État membre autre que celui dans lequel sont domiciliés tant les expéditeurs que les destinataires de ces envois et les frais terminaux payés par lesdits services, peut être considéré comme un abus de position dominante au sens de l'article 86 du traité.*

²² Judgment of 17 July 1997 in Case C-242/95 *GT-Link* [1997] ECR I-4449.

Justice simply concludes that it has previously stated that unfair prices for the purposes of Article 82 means prices which are excessive because they have no reasonable relation to the economic value of the goods or services supplied.²³

3.4.4 United Brands

As follows from the presentation this far there are no clear examples of the Court of Justice condemning excessive prices in a free and unregulated market. In addition, there does not seem to be any preferred method of assessing whether a price is excessive or not. Comparisons with costs or prices charged elsewhere by other companies would seem hard to implement in practice. However, in the well-known direct action of *United Brands v. Commission*²⁴ the Court explained how to assess whether a price is excessive or not. The Court's statements are not limited to situations of legal monopolies; in fact they were given in a situation where there was no legal monopoly or exclusive rights.

In a decision the Commission had found that United Brands had abused its dominant position by imposing unfair prices for the sale of Chiquita Bananas to its customers in the Belgo-Luxembourg Economic Union, Denmark, the Netherlands, Ireland and Germany. According to the Court it would be an abuse of a dominant position if United Brands charged a price which was excessive because it had "*no reasonable relation to the economic value of the product*".²⁵ This excess could, *inter alia*, be determined objectively according to the Court of Justice if it was possible for the price to be calculated by making a comparison between the selling price of the product in question and its cost of production, which would disclose the amount of the profit

²³ *Ibid.*, p. 39.

²⁴ Judgment of 14 February 1978 in *Case 27/76 United Brands Company/Commission* [1978] ECR 207.

²⁵ *Ibid.*, p. 250.

margin. According to the Court of Justice, the questions to be determined were, therefore, whether the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to that question is in the affirmative, whether a price has been imposed which is either unfair in itself or when compared to competing products.

Having stated in which way to determine whether or not a price charged is excessive the Court of Justice added that other ways of finding out the same thing could also be devised.²⁶ However, as it turned out the Commission had not proved the factual points in its decision, and thus the decision was annulled. Even though the Commission decision was annulled the United Brands case is generally considered to be the most explicit reasoning by the Court of Justice when it comes to excessively high prices. Obviously, there are different ways of interpreting the statements by the Court, but it would seem clear that the Commission interprets the statements as including a two stage test.²⁷

The first thing to analyze would seem to be to what extent the price charged for a product has any reasonable relation to its economic value. The excess could be determined by making a comparison between the selling price and the cost of production. It is not clear here what ratio between the cost of production and the selling price that would be considered as excessive. After finding such an excess (whatever it might be) it remains to be decided to what extent the price is unfair, either in itself or when compared to competing products. Thus the finding that the price bears no relation to the cost of production is only the first step when analyzing whether a price is excessive.

As concerns the subsequent step, i.e. after having found disproportion between the cost of production and the selling price, there would seem to be two ways of fulfilling this. The first option

²⁶ *Ibid.*, p. 250-253.

²⁷ Commission decision of 23 July 2004 in COMP/A.36.568/D3 *Scandlines Sverige AB v. Port of Helsingborg*.

would be that the price is "*unfair in itself*", and the other that the price is unfair when "*compared to other competing products*". The second of these two options is admittedly vague but nevertheless it indicates what should be compared, namely competing products. As for the first option, it is not clear to what extent the analysis should focus exclusively on the cost side or whether also the demand for the product should be taken into account.

In its decision in *Scandlines*²⁸ from 2004, the Commission stated that when deciding the economic value of a particular product or service, i.e. investigating to what extent the price was unfair in itself, also other non-cost related factors, notably the demand for the service, had to be taken into account. The statement of the Commission concerning the demand side deserves to be quoted in full.

The demand-side is relevant mainly because customers are notably willing to pay more for something specific attached to the product/service that they consider valuable. This specific feature does not necessarily imply higher production costs for the provider. However it is valuable for the customer and also for the provider, and thereby increases the economic value of the product/service.

As a consequence, even if it were to be assumed that there is a positive difference between the price and the production costs exceeding what Scandlines claims as being a reasonable margin (whatever that may be), the conclusion should not necessarily be drawn that the price is unfair, provided that this price has a reasonable relation to the economic value of the product/service supplied. The assessment of the reasonable relation between the price and the economic value of the product/service must also take into account the relative weight of non-cost related factors.

As would appear evident from the *Scandlines* decision the Commission seems reluctant to strike down on what might be perceived as unfair prices. Indeed, if the reasoning of the Commission is correct it would seem practically impossible to strike down on a price which is not higher than the monopoly price. The

²⁸ Commission decision of 23 July 2004 in COMP/A.36.568/D3 *Scandlines Sverige AB v. Port of Helsingborg*.

monopoly price, i.e. the highest price that a dominant company would be able to charge without losing sales in excess of revenues generated by the high price, would seem to reflect the prevailing attitude of the customers, thus being a good indication of the value which customers attribute to the service or product.

3.5 Conclusions

There can be no doubt that Article 82 prohibits excessive exploitative prices. Case law from the Court of Justice is explicit in the sense that some pricing strategies might constitute an abuse of a dominant position. At the same time it is equally clear that the Court has not yet condemned a particular pricing practice, in a free and unregulated market, as amounting to unfairly high and exploitative prices and thus constituting an infringement of Article 82. Admittedly, the Court of Justice has not ruled out that prices might be banned for being exploitative high, but there is no case law in which the Court has actually found a particular price being exploitative high.

As regards case law it would seem fair to say that the Court does not always separate between excessively high exclusionary and excessively high exploitative prices.²⁹ Furthermore, the Court does not seem to separate between situations where the dominant position is the result of a legal monopoly or for that matter an exclusive right and situations where the market is more or less free. One can of course only speculate on the reasons for this, but one explanation could be that when it comes to preliminary references the Court only answered the questions put to it, and for direct actions the facts of the case are (of course) determinative for the outcome.

Notwithstanding subsequent case law it would seem clear that it is primarily in *United Brands* that the Court actually sketched out

²⁹ Cf. judgment of 4 May 1988 in Case 30/87 *Bodson* [1988] ECR 2479.

which method that might be used for assessing whether a price is excessively high. References in other case law concerning costs,³⁰ comparison with the prices of competitors or prices elsewhere,³¹ whether the customer has asked for the particular service³² etc, would all seem rather difficult to apply in practice.

As for the method discussed in *United Brands* it is submitted that it involves two steps. First a disproportion between the price charged and the costs of production need to be established. Even though a regulatory authority may have some margin of discretion when it comes to designating which costs that would be relevant, this analysis has to be followed by an assessment as to whether the price is "*unfair in itself*" or unfair when "*compared to other competing products*". For the second possibility it is clear that the comparison has to be made on a consistent basis,³³ which in itself is a limitation given that there might not be that many competing products – after all, the investigation concerns a dominant undertaking. However, the difficulties now sketched out would seem minor as compared to an assessment of whether a price is unfair in itself. If one would – as the Commission in *Scandlines* – take into account also other non-cost related factors, it would seem less likely that monopoly pricing or any price less than that would be considered excessive. Assuming that the primary objective of the pricing strategy of any firm (on a free market) is to extract the maximum from its customers, it is

³⁰ Cf. judgment of 5 October 1994 in Case C-323/93 *Centre d'insémination de la Crespelle* [1994] ECR I-5077, and judgment of 10 February 2000 in joined Cases C-147/97 and C-148/97 *Deutsche Post* [2000] ECR I-825.

³¹ Cf. judgment of 13 July 1989 in joined Cases 110/88, 241/88 and 242/88 *Lucazeau (SACEM)* [1989] ECR 2811 and judgment of 13 July 1989 in Case 395/87 *Tournier* [1989] ECR 2521.

³² Cf. judgment of 10 December 1991 in Case C-179/90 *Merci convenzionali porto di Genova* [1991] ECR I-5889.

³³ Judgment of 13 July 1989 in joined Cases 110/88, 241/88 and 242/88 *Lucazeau (SACEM)* [1989] ECR 2811, p. 38.

respectfully submitted that I fail to see that any price would be excessive in itself.

Given what has been stated previously, it would seem as the prohibition against excessively high exploitative prices has its primary scope of application in situations of legal monopolies or regulated markets.³⁴ In free markets it may principally be used when the pricing strategy focuses on something other than exploiting its customers on that particular product, for example by trying to prevent parallel imports.

³⁴ Cf. in this respect the *Commission Notice on the application of the competition rules to access agreements in the telecommunications sector – framework, relevant market and principles*, [1998] OJ C 265, p. 97 and 105-109.

4 The Paradox of the Exclusion of Exploitative Abuse¹

Bruce Lyons

4.1 Introduction

European Commissioner Neelie Kroes kicked off the current major review of Article 82 by saying: *'it is sound for our enforcement policy to give priority to so-called exclusionary abuses, since exclusion is often at the basis of later exploitation of customers'*.² This is a common position to hear in policy circles, but it is inherently paradoxical. *If exclusionary abuses are bad because they ultimately exploit consumers, why should the policy emphasis not be on directly exploitative abuses?* The answer has direct relevance for the current Article 82 review: should exploitative abuses be integrated alongside exclusion in the emerging guidelines?³

This may seem like an esoteric debate, but this translates into fundamental guidance for business, as well as competition

¹ The support of the Economic and Social Research Council is gratefully acknowledged. I also thank numerous colleagues at UEA's Centre for Competition Policy for discussions that helped these ideas unfold.

² 'Preliminary Thoughts on Policy Review of Article 82' [emphasis in original] Speech at the Fordham Corporate Law Institute, New York, 23rd September 2005.

³ A quite separate historical paradox is that, despite the conventional wisdom, the drafters of Article 82 originally intended it to relate to exploitative abuses and not exclusionary abuses. Akman (2007) examines the travaux préparatoires (preparatory documents) of Article 82EC and finds that it is *not* based on 'ordoliberal' foundations. The drafters were mainly concerned with increasing 'efficiency' and intended to protect the customers, not competitors, of dominant undertakings.

practitioners, as to what is and is not lawful behaviour for businesses that dominate their markets. I begin by clarifying what is at issue. There are two ways in which a dominant firm might abuse its market position. First, it might directly harm its customers; for example, by raising prices or limiting its effort to lower costs or develop new or better products. This is known as an exploitative abuse. Second, it might adopt strategies that exclude rivals from making an effective challenge to its dominant position; for example, by predatory pricing, product bundling, exclusive contracts or refusal to supply. Collectively, these are known as exclusionary abuse.

The formal EC law covers both types of abuse, and provides little guidance on whether exploitation or exclusion should be the greater concern.⁴ The case law, however, has greatly emphasised exclusionary effects, with exploitative effects appearing to be little more than a sideshow.⁵ It is in this context that DG Comp's opening, and so far only, major public contribution to the review of Article 82 has been the much discussed staff paper on exclusionary abuses.⁶ There has been no public commitment as to the next stage of review, but it is likely that the working paper will be developed into a set of guidelines.

Exploitation of consumers is the textbook abuse by a monopolist or dominant firm. Because consumers cannot easily switch to an alternative source of supply, the dominant firm can raise price to enhance profits. Consumers lose out by having to pay more and buy less, and there is a consequent distortion in the allocation of resources. All economics students learn this in their first year of study, and it is a major justification for competition policy. High

⁴ Article 82 of the EC Treaty prohibits the abuse of a dominant position, and highlights: 'unfair' pricing or trading conditions; 'limiting' production or technical development; 'applying dissimilar conditions to equivalent transactions'; and 'supplementary obligations' in contracts.

⁵ See e.g. Whish '*Competition Law*' (2004) ch.5.

⁶ See also the discussion of appropriate economic principles by the EAGCP, published on the DG Comp website.

prices are the most direct form of abuse, and are the most frequent in antitrust cases.

In principle, product quality, service levels and product range may also be abused by a dominant firm. It is difficult to measure these in order to compare them with an appropriate benchmark, but the same, to a lesser extent, can be said of high prices. However, there is a more fundamental problem with trying to appraise non-price exploitation. The current level of our understanding is that it is not always clear even in which direction the abuse will take place. For example, consider the provision of quality. In general, a dominant firm considers the marginal revenue to be gained from spending on a quality enhancing investment, whereas total welfare is maximised by comparing marginal benefit to consumers to the extra costs. The product, while the marginal revenue calculation emphasises only the higher price that can be extracted from existing consumers and any marginal consumers that might be won or lost as a consequence. Although there are some reasons to expect any bias to be towards suboptimal quality, it can be shown that the actual balance is highly sensitive to the nature of 'quality', as well as the price at which quality is compared.⁷ In principle, then, the monopolist might try to save costs by providing a suboptimal quality, but there is no overwhelming economic theory equivalent to the expectation of high prices. In the murky world of exploitative effects, this is probably sufficient to justify the overwhelming emphasis on price exploitation. This is the focus of the remainder of this paper.

⁷ At higher prices charged by a monopolist, the customer base is more likely to be those who value quality and so this tends to push up the monopolist's choice of quality – so one distortion (high prices) can counterbalance another (lower quality).

4.2 The Paradox

Despite the textbook monopoly abuse being high prices, most competition economists (and probably also most competition lawyers) have a profound distaste for the direct control of exploitative abuse under Article 82. It conjures images of detailed interventions throughout the economy, when most would argue that regulation should be reserved for cases of genuine natural monopoly (e.g. those parts of privatised utilities which cannot be structured competitively due to network economies). The latter require specific, well informed regulators, and these cannot be put in place for all corners of the economy in which a firm may be dominant. Far better, the argument goes, to concentrate on maximising the chances for the competitive process to throw up a new competitor; hence, the focus on exclusionary abuse.

Before assessing whether this should be the end of the story, we take a step back to recall the DG Comp review of exclusionary abuses. The main thrust has been that the key test should be ultimate consumer effects, and not protecting rivals *per se*. This was anticipated by Ms Kroes in her Fordham speech: ‘First, it is competition, and not competitors, that is to be protected. Second, ultimately the aim is to avoid consumer harm. I like aggressive competition – including by dominant companies – and I don’t care if it may hurt competitors – as long as it ultimately benefits consumers.’ Many of the details of the subsequent Commission working paper⁸ have been criticised, particularly for not achieving this aim, but this main thrust on consumer effects has received almost universal acclaim.

The Commissioner’s views are shared by most competition economists.⁹ For example, on the purpose of Article 82 being to

⁸ DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses; public consultation, December 2005.

⁹ E.g. see the EAGCP report, *op cit*. This is not to deny some significant disagreements over consumer versus total welfare as the appropriate

protect consumers against harm, an eminent panel of academic economists recently wrote: 'An economic approach to Article 82 focuses on improved consumer welfare. In so doing, it avoids confusing the protection of competition with the protection of competitors and it stresses that the ultimate yardstick of competition policy is in the satisfaction of consumer needs. Competition is a process that forces firms to be responsive to consumers needs with respect to price, quality, variety, etc.; over time it also acts as a selection mechanism, with more efficient firms replacing less efficient ones.' [EAGCP, 2005, p.2]

So, we have a strong consensus that an exclusionary practice, whereby a dominant firm hurts rivals, is only an abuse when the consequence is that consumers are expected to be harmed.¹⁰

There is also a strong consensus that Article 82 should be interpreted exclusively in relation to exclusionary effects. For example, the same panel wrote: 'whenever possible, competition is to be preferred to detailed regulation as the best mechanism to avoid inefficiencies and foster productivity and growth; this calls for a 'non-dirigiste' approach to competition policy that focuses in most cases on entry barriers; in the context of Article 82, it is then natural to focus on competitive harm that arises from exclusionary strategies. Possible exceptions concern some natural monopoly industries which may require ongoing supervision of access prices and conditions by regulatory agencies.' [EAGCP, p.3] The implication is that any regulation of exploitative effects should be through these specialist agencies, and not through Article 82.

standard. This particular dispute has been surprisingly silent in the debate, though it does not make a fundamental difference to the line of argument in this paper.

¹⁰ This is also in line with the modern treatment of mergers, as exemplified by the revised merger regulation moving away from the 'dominance test' in favour of the 'significant impediment to effective competition' test. The latter is usually interpreted as protecting consumer benefits.

The US Supreme Court agrees: ‘The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful, it is an important element of the free market system’ [540 U.S. Verizon-Trinko, 2004, p.407].

So, we can summarise on exclusionary abuse: while hurting one or more rivals is necessary for an exclusionary abuse, it is not sufficient – to be an abuse, exclusion also requires an expectation of eventual consumer harm (i.e. exploitation). And on exploitative abuse: many eminent economists and lawyers say that Article 82 should not deal with such abuses.

This results in our paradox: *it is good to prohibit only those exclusionary practices which can be expected to result (indirectly) in an exploitative abuse...but at the same time it is bad to prohibit directly exploitative practices!*

4.3 The Hazards of Identifying and Remediating Exploitation

I do not propose to challenge the first part of the paradox – that exclusionary practices should be seen as abusive only when they harm consumers. Indeed, I see that as a key achievement of the economic approach to competition policy. However, the distaste for prosecuting direct exploitation requires deeper analysis to understand why this position is held and what its limitations are. I group the analysis around: measurement; market dynamics; multi-sided markets; and remedies.

4.3.1 Measurement issues

European case law suggests that the key question to ask is: has the dominant firm ‘made use of the opportunities arising out of its dominant position in such a way as to reap trading benefits which it would not have reaped if there had been normal and sufficiently

effective competition[?] In this case charging a price which is excessive because it has no reasonable relation to the economic value of the product supplied would be such an abuse. This excess could, inter alia, be determined objectively if it were possible for it to be calculated by making a comparison between the selling price of the product in question and its cost of production, which would disclose the amount of the profit margin' (United Brands, 19, #249-251).¹¹

There are many reasons why cost measurement is easier said than done. Most of these are well known, so I only sketch them here. Identifying costs and attaching them to a particular product is highly complex in most businesses. Firms normally record costs in a way that is most useful for financial purposes, and this can lead to substantial differences between accounting costs and economic cost. Purchase costs often depend on volume or have multiple components, for example, depending on additional services or demand growth. Capital costs require an assumed cost of capital to convert into annual costs, and the cost of capital may depend on the market power of the firm. Many costs are common across a product range, and allocating these costs to specific products is highly controversial. Sunk costs, for example for a facility built years ago, create further problems: either they are ignored as bygones (which would lead to dynamic problems as discussed below) or they need revaluing (and if valued in terms of their economic rents, this means they depend on achievable price and so this does not provide an independent benchmark against which to judge price). The valuation of intangible assets, such as brands, suffers from the same circularity problem. Business is risky and some inevitably fail having incurred

¹¹ *United Brands v Commission of the European Communities*, Court of Justice of the European Communities, Case 27/76 [1978] ECR 207. More recently, the meaning of 'economic value' has been interpreted more widely, both by the Commission in *Swedish Ports* and by the UK Court of Appeal in *Attheraces vs. BHB*, to include value to the purchaser. See PwC (2007). The cases are *Scandlines Sverige AB v Port of Helsingborg* COMP/A.36.568.D3 and *Attheraces vs. BHB*, 2007, EHCA civ38.

unrecoverable costs. In this context, a competitive ex ante return will turn out to be much higher ex post for those firms lucky or efficient enough to survive – this is sometimes known as the survivor bias. It is a particularly important issue for R&D intensive industries where only a few lines of research pay off and some turn out to be blockbuster successes.¹²

This is a dauntingly long and undoubtedly incomplete list of problems. It suggests we should be extremely careful if trying to measure how high a particular price is in relation to cost. Nevertheless, these problems should not be over-exaggerated. Regulatory agencies have great experience at measuring costs and reasonable approximations can be made. Also for licensing remedies... It is, of course, important that cost estimates should be sensitivity tested in the light of whichever of the measurement problems are thought to be most important in the case in question.

Furthermore, cost measurement is an important element to understanding some important types of exclusionary abuse (e.g. predatory pricing). Perhaps more importantly, it is crucial to developing appropriate remedies for many exclusionary practices. For example: compulsory licensing will only be effective if supported by an appropriate analysis of a suitable royalty fee; and access agreements need to identify a suitable access price. Put another way, excessively high royalties or access prices can be seen as either upstream exploitative or downstream exclusionary. The Commission needs to understand exploitative abuse in order to remedy exclusionary abuse.

An alternative to using cost as the benchmark for forming a judgement as to whether a price is too high, it may be possible to compare prices in different markets. In this method, it is important to find reasonably competitive comparator markets. These might be found in the form of similar products sold in different geographic

¹² For a large, say, pharmaceuticals company with numerous lines of research, the failed lines may stay within its cost base, albeit in a lumpy fashion over time, but for a specialist company this will not hold.

markets, where the market structure is not dominated by a particular firm (careful adjustment may be needed for tax or other differences); or it could be in the form of a comparison with other products which have similar cost structures.

A particular example of the former approach is where the dominant firm itself price discriminates between markets according to local conditions. There is no space here to go into details on the pros and cons of price discrimination.¹³ Suffice it to say that there are many occasions where price discrimination enhances consumer welfare because it results in more consumers being able to buy the product, while in other situations it may distort the market. The point at issue here is whether the existence of price discrimination should be seen as evidence that there is an exploitative abuse in the high price market. This is dangerous territory because a common price in the absence of discrimination is likely to be much higher than in the low price market under discrimination. In particular, the lowest discriminatory price may well be below average cost.

4.3.2 Market dynamics

There are two types of dynamic issue. First, there is the role of high prices in the entry process. Second, there is the role of high prices in the investment incentive for a dominant firm (or a potentially dominant firm).

Suppose we have been able to identify a suitable yardstick for comparing prices, either with good cost data or a suitable comparison across markets. When can we say that a price is exploitative? For example, is a margin of 10%, 20%, 50%, 100% or 500% an abuse? Of course, the question is not well posed because it has no element of time. For example, short-term fluctuations in demand when production is relatively fixed leads to large price

¹³ See previous volume in this series on the 'Pros and Cons of Price Discrimination'.

fluctuations (or rationing or substantial swings in inventories). In fact, periods of high prices alongside periods of low prices are perfectly consistent with a well-oiled competitive market. So we should focus on persistence: how long must a high price continue in order for it to be called an abuse?

In the context of a dominant firm, the answer depends on how long it might take a small rival to expand or a new entrant to enter the market. The height of current prices has a more limited role. In fact, an entrant may have his attention drawn to a potential opportunity by a very high price, so in this sense high prices act as a powerful signal – the higher the better if they advertise opportunities (Hayek, 1968). Once the opportunity is understood, it is more important for the potential entrant to focus on what price would be post-entry. This means that the dominant firm's expected response must be worked out. If he is expected to respond aggressively, then even a very high current price will not attract entry. Of course, this brings us back to exclusionary behaviour. If the dominant firm has a reputation for predatory responses to entry, or if it is expected to adopt a strategy to limit an entrant's options (e.g. exclusivity agreements or inefficient bundling), then this becomes an issue of *expected* exclusionary effects, which may be difficult to prove (i.e. before the persistence of high prices and lack of entry are observed). Potential entrants will be particularly concerned about ex post competition if they have to invest in assets that will be at least part sunk (i.e. non-recoverable).

Turning to the incentive for the dominant firm, it is the expectation of high profits that provides the incentive to invest in a whole range of activities, including capacity, process innovation, product innovation, design, branding, marketing activities, distribution network and supply chain. Some of these investments have outputs that would be easily copied if they were not protected by intellectual property rights (including patent, trademark, copyright and database rights). It is long accepted that property rights, including IPRs, are necessary in a market system to create an incentive to invest. In their absence, many easily-copied ideas which

are nonetheless valuable would not be developed. Consequently, consumers would be worse off. The effort and inspiration of invention is not usually picked up in cost data, and there is a very large survivor bias, so the price-cost margin on intellectual property can appear to be very high. If the inventor goes on to produce a product on which he holds an IPR, this can make the product price seem extremely high, and if he licenses the right to produce, the royalty payment might seem 'too high'.

4.3.3 Multi-sided markets

Economists have become increasingly aware in recent years of the importance of multi-sided platforms, more often known as two-sided markets. These are intermediate platforms that provide benefit to more than one distinct group of customers, and where there are significant externalities (often positive) between these groups. A surprising number of markets seem to share some key features.¹⁴ For example, both advertisers and readers derive benefits from a newspaper, and each group derives a benefit from the other (e.g. advertisers benefit from more readers to be influenced by their adverts, and readers may or may not enjoy reading adverts). Payment card systems have similar properties, with shoppers enjoying a convenient means of payment which is more beneficial the more merchants there are who accept a card under that system (e.g. Visa). A port provides its services to a range of different customer groups, including freight and passenger ferries (though it is not obvious that there are externalities between groups of consumers in this case). In some markets, the two types of customer may include the same people in different guises; for example, mobile phone calls benefit both callers and those who receive calls. A final example is horseracing, in which owners, spectators and punters

¹⁴ Many emerging markets in the 'new economy' seem to have similar attributes of network and other positive externalities.

each derive pleasure from participating in their different ways (i.e. entering, watching and betting on races).

In each of these cases, the different groups of consumers contribute financially to support investment in the platform in different ways. The quality of the platform is enhanced by investment, and such endogenous investments tend to create highly concentrated market structures (Sutton, 1991 and 1998). This makes them disproportionately important in antitrust cases. Much recent theoretical work has enhanced our understanding of pricing practices in multisided markets. Outcomes depend on factors such as which group conveys more positive externalities on the other – the former group is naturally subsidised relative to the latter, who may appear to pay disproportionately high prices even when the market is perfectly efficient.

This has resulted in some high profile ‘exploitation’ cases in recent years, including: the European Commission on Visa and Swedish Ports; the UK OFT on the price BHB charged bookmakers for the pre-race data necessary for bets to be taken; and the UK Competition Commission on mobile phone termination charges.¹⁵ These cases often waver between Articles 81 and 82 because a joint venture is set up (e.g. Visa for card payments with member banks collectively setting interchange fees) or an entity controls the sport as its governing body (e.g. the British Horseracing Board, BHB, in the horseracing case). The legal issues in relation to Articles 81 and 82 may be different, but the economic analysis is similar. These are often complex cases and competition authorities take some time to come to grips with them. The Visa, BHB and mobile phone cases are analysed in depth in Lyons (2008).¹⁶ Close examination of such markets shows that a competition agency’s first thoughts about the exploitation are often wrong, and apparently very high prices about

¹⁵ Mobile termination charges was a market inquiry, unusual to the UK competition policy system, so no one firm was considered dominant.

¹⁶ See chapters by Rochet on Visa, Lyons on BHB and Armstrong & Wright on mobile phones.

which some customers complain very loudly may be part of a reasonably optimal payments package when all groups of consumers and investment incentives are properly taken into account.

4.3.4 Remedies and punishments

It is important not to confuse the identification of an abuse with the choice of remedy. The natural remedy for high prices might seem to be to regulate them, but this is not the ideal option. The fundamental source of market power is some form of entry barrier, and the basic principle of intervention should be to remedy the problem at source.

In large industries subject to large economies of scale, price regulation may still be the best option. The classic examples are in the utilities such as gas and electricity. The problems of price regulation are well understood. Once again, problems of cost attribution and incentives to invest are important issues.¹⁷ Access price regulation requires a subtle balancing of long term incentives against short term rip-offs. Another issue is the cost of establishing a specialist bureaucracy. This is necessary because a generalist competition agency is unlikely to have the skills and resources to do an effective job – it would do more harm than good by setting inappropriate prices (either too low or too high) and encourage regulated firms to waste resources trying to manipulate a weak regulator. Nevertheless, for a limited number of markets, all this is worthwhile because otherwise consumers would indeed get exploited. Specialist regulators are fully justifiable in key areas of large markets, but they would be disproportionate if set up for all corners of the economy whenever a dominant firm emerges.

Sometimes it is possible to limit the amount of price regulation by vertical restructuring, separating the key stages of production at which scale economies are most marked. This means that large parts

¹⁷ I do not dwell on the subtle differences between rate of return regulation and RPI-X, etc.

of most industries can be left to market forces while core distribution networks, which would be massively inefficient to duplicate, can be subject to price regulation. This form of vertical restructuring can be effective, especially when the firms were created away from the market as in the privatised utilities. Where vertical integration has been created in a relatively competitive market, however, much greater caution is necessary because important efficiencies may be lost. An alternative form of restructuring is horizontal, breaking up a dominant firm, as the US did most famously with Standard Oil in 1911 and AT&T into the 'Baby Bells' in 1984 (and attempted to do with Microsoft in 2000 before it was overturned on appeal). This is a rare and dramatic remedy, and enormous caution is necessary because the efficiency consequences are so hard to predict.¹⁸ Quite generally, it would be far better to facilitate expansion by a small rival or entry by a new firm, preferably one with a track record in a neighbouring market so it has the appropriate experience, financial resources and skills to succeed. This requires a deep analysis of the source of current entry barriers.

It is possible to be more creative in thinking about alternative remedies. In particular, many markets have several alternative suppliers, yet one long-standing incumbent remains dominant despite charging higher prices. This is common in gas and electricity distribution in the UK (see Waddams and Wilson, 2006). Customer switching would soon encourage a dominant firm to reduce its prices, but domestic customers are remarkably slow to save even substantial sums of money for relatively little switching effort. The reasons for this consumer inertia are only just beginning to be understood, but inasmuch as it is a matter of lack of credible information, this can be remedied in various ways. For example, a

¹⁸ Some of these problems are apparent in divestiture remedies applied in EU merger cases. See Davies and Lyons (2007). Note that there is an important difference between a merger prohibition, where integration has not yet taken place, and a divestiture or break-up where some previously integrated functions have to be replaced.

utility might be required to print on its customers' quarterly bills the potential cost savings that could be achieved by switching to a lower price supplier. Indeed, a similar remedy was imposed by the UK Competition Commission on store cards, where credit terms are much higher than for other forms of credit. Similar messages advertising the prices available at a dominant firm's rivals might be required at the point of sale.¹⁹ Of course, such remedies are not possible if a firm is so dominant that there is no serious alternative supplier.

We next turn to punishment for exploitative abuse. A breach of Article 82 is subject to a maximum fine of 10% of turnover of the entire firm, not just the abused market. The turnover base means that, although 10% seems small in relation to the sort of margins that might be found to be exploitative, the fine could be very significant for a non-specialist firm. If the threat of a fine is seen as significant, then it may have a deterrent effect on high prices. In some circumstances this may be beneficial, though there is a danger of adverse dynamic effects for the reasons discussed above. More importantly, it would make everyday business life horribly complicated if firms have to consult competition lawyers every time they raise price. This makes it inappropriate to punish high prices with a fine, though private action for compensation would not be inappropriate but *only* if there has been a prior finding of abuse. The primary sanction should be remedies to limit future exploitation.

Finally, we mention a potential hazard of not tackling exploitative effects under Article 82. If the Commission says that it will not bring cases of exploitative abuse, and if private enforcement continues to be encouraged, there is a serious danger that exploitation cases may end up in the non-specialist courts, where none of the subtle difficulties discussed above are likely to be

¹⁹ Great care needs to be taken that such practices do not result on coordinated behaviour between firms.

appreciated and bad decisions will be made. A good example is the UK ATR vs. BHB case which was rightly overturned on appeal.²⁰

4.4 Comparison with the Application of Article 82 in Relation to Exclusionary Effects

We can now bring together some themes that underlie the paradox of the exclusion of exploitative effects. Exploitative effects are...

- a) Naturally shorter lived and more dangerous to remedy (Type 1 error)

The fundamental process of competition is that smaller firms expand and new firms are attracted by profitable opportunities. As these minnows grow, a slack incumbent will see its dominant position erode unless it responds positively with a better product offering (including price, quality and variety). In a well functioning market, exploitative dominance is naturally self-limiting. In contrast, price regulation interferes with this process and has the unfortunate side effect of discouraging entry. Furthermore, there are ever-present dangers of regulators getting it wrong due to asymmetric information and distorted incentives.

By comparison, the remedies for exclusionary abuse tend to be less dangerous to the competitive process. For example, a dominant firm may be required to provide access agreements or not to sign exclusive contracts. Although these remedies might undermine investment incentives if they are wrongly imposed, at least they do not undercut the profitability of entry.

- b) Possibly mainly due to strategic entry barriers

²⁰ See footnote 9.

It is possible to distinguish two generic types of entry barrier: structural and strategic. A structural barrier is created by natural supply and demand conditions in the market; for example, where the technology dictates large economies of scale. A strategic barrier is created by a dominant firm, which deviates from short-term profit maximising behaviour in order to exclude an existing or potential rival; for example, signing exclusive contracts that do not significantly improve investment incentives. If all barriers to entry were strategic and readily prohibited by a focus on exclusionary effects, then exploitative behaviour could not last long. Of course, the existence of structural barriers in some markets (or unremedied strategic barriers in place now or having established current market structure in the past) means that exploitation may persist.

c) Harder to prove to the standard required by the Court

For reasons discussed above, it is very difficult to prove that prices are excessive, let alone that a dominant firm is falling short in terms of quality, variety or innovation. There is an almost complete lack of easily observable benchmarks for most dimensions of competition, though there may be some loose comparisons to be made with related products, internationally or over time. For price, at least cost or margin benchmarks can be collected, but there is always a problem in deciding what is a reasonable price in relation to costs. This is why it is often argued that price negotiations should be a matter of freedom of contract between buyer and seller.

In contrast, it may be easier to prove that rivals or potential rivals are being harmed by some exclusionary practice *and* to identify the expected direction of effect on customers (and so eventually on consumers). A similar argument can be used in relation to merger appraisal, where the direction of effect is also what is primarily at stake. Furthermore, in seeking evidence for exclusionary effects, DG Comp can rely on the very active help of injured third parties who will normally have much more at stake than individuals from a more

dispersed customer base at the wrong end of a directly exploitative abuse.

d) Politically more difficult to deal with

Two examples illustrate this general point. First, US practice has evolved very much in terms of exclusionary effects, which may also reflect section 2 of the Sherman Act which prohibits monopolisation. It might be argued that, with the emergence of global corporations, it would be good to harmonise what competition agencies do. Apart from political benefits of avoiding trans-Atlantic disputes, harmonisation also provides a clearer signal to firms and so may encourage compliance. Second, competition agencies have an important advocacy role: competition is good for both consumers and firms. If they get this message across, they gain valuable allies, creating status and enhancing funding. Firms find it difficult to understand why they should not maximise profits, and an exploitative abuse by one firm is an opportunity for others. Thus, while the business sector gains broadly by 'exploitation', rival firms are hurt by exclusionary abuses and so support their prohibition. Although these are important issues for the most senior practitioners, it would be unwise to allow these political side-effects to be an agency's prime concern.

4.5 The Appropriate Treatment of Exploitative Effects under Article 82

Where does this leave us? Overall, the arguments set out in sections 4.3 and 4.4 support the view that there is justification for a continuing focus on exclusionary abuses. However, it would be unwise to dismiss the core paradox I have identified. In the absence of a prospective sanction, there are likely to be some cases of exploitative abuse that can be remedied without fundamentally harming market dynamics. Proof may be difficult, but it is not

impossible. Most importantly, some barriers are structural, or the result of a history of unnoticed, unprosecuted or ineffectively prosecuted exclusionary practices. It is for these cases that provision under Article 82 for exploitative abuse should be maintained.

A similar conclusion has recently been articulated independently by Lars-Hendrik Röller (2007) who calls these 'gap cases'.²¹ He goes on to argue that the key analysis should therefore not be on the high prices per se, but on how dominance was achieved. Exploitative cases 'should be based on acquiring a dominant position through exclusionary conduct. In this way, exploitative abuse cases are back to investigating exclusionary conduct, which is in fact the proper way to identify anticompetitive conduct' (p.9-10). We part company on this point, because I do not think it is feasible to focus entirely on how a dominant position was attained – this is likely to be lost in the mists of history. It would be a substantial distraction, to say the least, if guidelines and case law developed such that the main focus of the competition inquiry was on past history rather than current and continuing exploitation. If the source of dominance could not be *proved* to be past exclusionary behaviour, the Commission would not be able to find an abuse that would allow remedies to be put in place, for example by imposing conditions to facilitate entry. The finding of abuse and the choice of remedy should be kept separate.

Another advantage of maintaining exploitative effects under Article 82 is that it is far better to keep the analysis of economic exploitation where it belongs, in a specialist competition agency and not in the hands of private actions in non-specialist courts. Specialist regulators are not the answer because they are not efficient for areas of the economy other than for a few natural monopoly infrastructure industries.²² Wherever possible, the remedy should be in the form of encouraging expansion or entry to undermine the incumbent dominant. The key idea is to use the market to undermine a

²¹ See also Motta and De Streel in this volume and Vickers (2005).

²² In this, I disagree with some colleagues on the EAGCP (see earlier quote from EAGCP, footnote 7).

dominant firm's incentive to exploit customers. The encouragement of customer switching by providing appropriate information may be a helpful part of a remedy package. Only as a last resort should price regulation be considered. Fines and other punishments should not have a role in relation to high prices (except where they are linked to exclusionary abuse, which is beyond the current topic).

Finally, having established this important niche role, it is then entirely appropriate for exploitative abuses to be included in any Article 82 guidelines. Nevertheless, it must be conceded that the prohibition of exploitative high prices should be undertaken only with great caution. Ms Kroes is broadly right that the implementation of Article 82 to prioritise abuses that affect the fundamental process of competition.

4.6 Wider Consistency of Competition Policy

This paper has been about a paradox relating to consistency within Article 82. While I have highlighted some of the problems of punishing high prices, I have stressed the importance of maintaining the principle that high prices can be an abuse. Only if an abuse has been found can a remedy be applied, and that remedy need not be clumsy regulation. It is not unusual to hear the argument that high prices should not be considered under Article 82, but should be left to specialist regulatory agencies. But on what grounds should sectors be selected for price control? For some sectors, there may be strong *ex ante* grounds for regulation, but other cases will be marginal. It will be less restrictive if the latter are given the benefit of the doubt with the knowledge that they can be picked up *ex post* if prices become exploitative. The alternative might be to set up regulators whenever there is doubt or in response to political pressure.

This issue of consistency goes wider still. The ECMR revisions and guidelines include a more positive attitude to efficiencies. Merger analysis now focuses quite rightly on prohibiting (or remedying) any merger for which there is an expectation of future

high prices and other customer detriment. Article 81(3) includes consumer benefit, for example through lower prices, as a necessary condition for the exemption of restrictive agreements. There is an increasing appreciation that state aid rules should be interpreted by the Commission in terms of economic effect. Overall, there is much at stake in maintaining the sound principle that exploitative high prices are an abuse of dominance under Article 82. They are integral to an economic effects based competition policy.

References:

Bergman, M. ed. (2005), *The Pros and Cons of Price Discrimination*, Swedish Competition Authority.

Akman, P. (2007) 'Searching for the long-lost soul of Article 82EC', *Centre for Competition Policy Working Paper* 07-5

Davies, S. and B. Lyons (2007), *Mergers and Merger Remedies in the EU: Assessing the Consequences for Competition*, Edward Elgar

DG Competition, (2005) *Discussion paper on the application of Article 82 of the Treaty to exclusionary abuses*.

EAGCP, (2005), *An economic approach to Article 82*, Report for the European Commission (DG Competition).

Hayek, F. (1968), *Competition as a Discovery Procedure*, published in *New Studies in Philosophy, Politics, Economics and the History of Ideas*, Chicago, University of Chicago Press.

Kroes, N. (2005), *Preliminary Thoughts on Policy Review of Article 82*, Speech at the Fordham Corporate Law Institute, New York, 23rd September 2005.

Lyons, B. ed. (2008), *Cases in European Competition Policy: the Economic Analysis*, forthcoming, Cambridge University Press

Röller L-H. (2007), *Exploitative Abuses*, in Ehlermann and Marquis (eds), *European Competition Annual 2007: A reformed Approach to Article 82*, forthcoming.

Sutton, J. (1991), *Sunk Costs and Market Structure*, Cambridge, MA: MIT Press

Sutton, J. (1998), *Technology and Market Structure: Theory and History*, Cambridge, MA: MIT Press

Vickers J. (2005), *Abuse of market power*, Economic Journal 115, F244-F261.

Waddams, C. and C. Wilson (2007), 'Do consumers switch to the best supplier?', *Centre for Competition Policy Working Paper* 07-6

Whish, R. (2004), *Competition Law*, Lexis Nexis.

5 **Should Innovation Rationalize Supra-Competitive Prices? A Skeptical Speculation**

Timothy J. Brennan*

Around the world, the core motivation for competition and antitrust policy has been to prevent of the creation of monopoly power that would lead to higher prices. Laws against price fixing, market allocation, and other forms of collusive agreements among competitors prevent sellers from subverting the competitive process, reducing output, and raising price.¹ From market definition through assessment of effects, merger policy is designed to prevent a “small but significant non-transitory increase in price,” either through increasing unilateral incentives to raise price (as each merged firm captures sales that would have been diverted to its partner) or facilitating coordinated conduct, i.e., collusion (U.S. Department of

* Professor, Public Policy and Economics, University of Maryland Baltimore County; Senior Fellow, Resources for the Future. Email: brennan@umbc.edu. I am very grateful for comments and suggestions from Mats Bergman, Arvid Fredenberg, Alan Gunderson, Jonas Häckner, Damin Neven, Niklas Strand, and especially seminar commenter Tommy Staahl Gabrielsen. Opinions and errors remain my sole responsibility.

¹ Not all jurisdictions apply the same tests to whether collusion is anticompetitive. The U.S. treats some forms of collusion as *per se* illegal, although practices that may have countervailing benefits are subject to a “rule of reason” test. *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 212-14 (1940); *NCAA v. Board of Regents of the University of Oklahoma*, 468 U.S. 85, 100-104 (1984). In Canada, illegality requires a showing that collusion “unduly” limits production, enhances price, or otherwise restrains competition. *Competition Act* (R.S., 1985, c. C-34) Sec. 45(1), available at http://laws.justice.gc.ca/en/showdoc/cs/C-34/bo-ga:l_VI/en#anchorbo-ga:l_VI.

Justice, 1997). Somewhat more controversially, law dealing with abuse of dominance or monopolization is also guided by effects on consumer welfare, although in addressing those effects by preventing harm to rivals, it is often subject to the criticism that it serves the interests of competitors rather than competition (Brennan, 2007).

As the title of the symposium suggests, the objective is not always to minimize price without limit. Most fundamentally, if prices are below the competitive equilibrium price, output and total welfare fall.² In the regulatory context, policies to hold prices down the regulated firm's average costs reduce incentives for efficiency and increase incentives to provide false information on costs to the regulator (Lewis and Sappington, 1988; Brennan, 1989). More generally, policies focusing exclusively on holding down price can reduce product quality or services. The recent decision in the U.S. to remove the century-old *per se* illegality of resale price agreements between wholesalers and retailers was motivated largely by economic models showing that maintaining high retail prices can provide dealers with incentives to provide point of sale service (Telser, 1960) or invest in ensuring product reputation (Marvel and McCafferty, 1984).³

More recently, the focus of competition policy on price has been criticized as being shortsighted. The Schumpeterian perspective, named after early 20th century economist Joseph Schumpeter, is that the important dimension of competition is not in the market at any one time, but in providing innovations that replace products (Ellig and Lin, 2001; Katz and Shelanski, 2005). Monopoly profits are the incentive and reward for this innovation. A common way of

² Heyer (2006) discusses the merits of the total welfare standard; Werden (2007) shows the problems with a consumer welfare standard in monopsony cases.

³ Externalities are not necessarily intrabrand, suggesting that price agreements among retailers could have similar motivations, questioning *per se* illegality of "naked" price fixing (Brennan, 2000).

discussing this enforcement myopia is as a contrast between “static efficiency”—maximizing surplus by having prices close to marginal production costs—and “dynamic efficiency”—promoting economic welfare through developing new products and improving the quality and reducing the production costs of the products currently available. As Audretsch, Baumol and Burke (2001 at 623) put it,

The evolution of industrial economics from its static base to its current dynamic form, that recognizes the competition can sometimes be destructive and that firm capability plays a major role in determining market performance, raises doubts about the efficacy of current competition laws. These concerns are exacerbated by the foundation of these laws in the policy implications of static analysis.

The very terms imply a contrast being a “static” stick in the mud and a “dynamic” visionary of the future. It is as if competition law enforcers were obsessing with the prices of telegrams, not noticing that the world has moved from telephones and email to WiFi and iPhones. Moreover, the welfare effects of short-run static harms must, almost by definition, pale beside the virtually eternal benefits of technological progress through Schumpeterian “creative destruction.” Antitrust may protect present competitors against that destruction, but at the expense of future benefits to the economy. In this light, even agreements from competitors should be viewed benignly (Jorde and Teece, 1992; Lorentzen and Møllgaard, 2006).

This vision is a powerful one, suggesting a non-interventionist approach to antitrust (Hahn, 2001). Gilbert and Tom (2001 at 3) find that the U.S. agencies are voicing more concern about the effects of innovation, and such concern “has been decisive in several merger and non-merger enforcement actions that have potentially very significant impacts for consumer welfare.” In a recent speech, Assistant Attorney General Thomas Barnett, the chief U.S. antitrust enforcer, emphasized the importance of innovation in contemporary competition policy.

Competition is important, but a simple model of competition — driving price down toward marginal cost — is not enough. If antitrust policy is to achieve its long-term goal of increasing consumer welfare, it also needs to foster the conditions that shift the supply curve "out." Antitrust policy must embrace a more sophisticated model of competition, one that recognizes the importance of innovation and other factors that increase efficiency

[A]ntitrust enforcers care about efficiency, but should we also care about what *type* of efficiency? The answer is yes, because it turns out that dynamic efficiency — particularly leapfrog dynamic efficiency — accounts for the lion's share of efficiency/welfare gains....

[A]ntitrust enforcers must be careful not to pursue immediate, static efficiency gains at the expense of long-term, dynamic efficiency improvements, since the latter are likely to create more consumer welfare than the former. Accordingly, U.S. enforcers approach practices that bear on innovation incentives with something close to the medical principle of "first, do no harm." (Barnett, 2007 at 6, 8, 16)⁴

Whether a new view of antitrust policy is required is the subject of this paper. Our purpose is to suggest that antitrust policy ought *not* be affected by these arguments about the primacy of dynamic efficiency. It is important to note that what the basis for this suggestion is *not*. It is not (necessarily) that creating structural and behavioral market conditions that reduce prices in the short run promote innovation in the long run, or in short, that competition is inevitably good for innovation and the tension is illusory. Short-run competition and longer-run innovation may well be complementary in some circumstances, but we do not presume that always to be so. Nor is it that, conversely, the engine of innovation is so powerful that public policy cannot affect its performance. Policy, antitrust or otherwise, can matter.

A speculation that the recent focus on innovation and the concern that antitrust may stand in its way may be exaggerated, rests on a simple intuition. One need not weaken antitrust to promote

⁴ I thank David Balto for distributing AAG Barnett's speech to the ABA Antitrust Section email list.

innovation; policy makers could turn multiple instruments available to influence the rate of innovation. The most notable tool is the length and breadth of intellectual property (IP) rights. The government may also turn to other incentive systems, such as prizes (Scotchmer, 2004 at 41-46; Macauley, 2005) to induce innovation. Moreover, if the dynamic rationale is correct, it should not be employed by accident, i.e., in only those sectors where firms happen to collude or merge, or where a single firm engages in potentially illegal monopolization or abuse of dominance. Finding that competition and static efficiency is the culprit suggests not only that antitrust enforcement should be weakened, but that industries should be made less competitive, sacrificing static efficiency to promote innovation as well.

This suggestion is not derived from a model with unchallengeable assumptions. Rather, it is a suggestion to counter any rush to judge conventional antitrust enforcement as trivial or passé. To elaborate on this theme, we begin by first investigating reasons why dynamic efficiencies are thought to dwarf static effects. We then turn to three leading arguments for why nominally conventional competition law enforcement neglects or undervalues dynamic considerations. Looking at the Microsoft case helps to examine two claims regarding the relationship between antitrust and innovation. First, it exemplifies that difficult dynamic cases about the path of future innovation ought not be reduced to or recast as static monopolization cases regarding competition in markets for current products. In addition, the broader context of the case illustrates the proposition that innovation considerations need not weaken enforcement; they could rationalize cases that static considerations might not warrant.

The penultimate section invokes a number of arguments, most but not all originating outside the intellectual property context, for suggesting that antitrust enforcement ought not be weakened in order to promote innovative activity. We conclude with a reminder that competition enforcement should take future markets into account when theory and evidence warrant. How best to do that

(e.g., whether to define “innovation market”) and what concentration standards to use fittingly remain as uncertain as the outcome of research and development activity in a modern economy. Present practice, which places on defendants the burden to show that efficiencies outweigh harms from anticompetitive conduct, provides a reasonable guide for practice even when those efficiencies are dynamic rather than static. Making that showing will be empirically difficult and, because it entails conceding the static allegations, unlikely.

5.1 Arguments for the triviality of static concerns

5.1.1 Going back to Williamson

Recent attention to a tradeoff between static and dynamic considerations seems to be an outgrowth of the ascendance in recent decades of high technology in the economy, particularly digital computing and telecommunications, its supporting technologies (e.g., large scale semiconductors), and in other fields, advances in pharmaceuticals (Audretsch et. al., 2001, Evans and Schmalensee, 2001; Hahn, 2001; López, 2001; Katz and Shelanski, 2005; Gual, 2007). However, the notion of such a tradeoff goes back nearly forty years in the antitrust literature. Williamson (1968) first showed that a relatively small reduction in costs created by a merger could produce welfare gains exceeding the losses from an increase in price associated with that merger.

To see his result, approximate the percentage loss in output Q , $\Delta Q/Q$, as $\varepsilon[\Delta P/P]$, where ε is the absolute value of the elasticity of demand and P is the price. Let C be marginal cost and ΔC the cost saving. If $c = \Delta C/C$ and $p = \Delta P/P$, then welfare rises from a merger that reduces cost and competition if and only if

$$c > \frac{1}{2} \left[\frac{\varepsilon p^2}{1 - \varepsilon p} \right].$$

For example, if the price increase p is 10% and the demand elasticity is 1 in absolute value, then it takes a marginal cost reduction of only about .56% to enhance welfare overall. The aphorism among antitrust economists is that “triangles are smaller than rectangles.” The welfare “triangle” loss from an increase in price results only from the output lost from the price increase, and that the welfare loss is only on average half of the lost surplus. On the “rectangle” side, the gains from a cost reduction are reaped over all of the output still being produced.

The tradeoff is not quite as favorable if the market was not competitive before the merger. If PCM is the pre-merger price-cost margin $[P - C]/P$, then a merger with cost reductions increases welfare only if

$$c > \frac{1}{2} \left[\frac{\varepsilon p^2}{1 - \varepsilon p} \right] + PCM \left[\frac{\varepsilon p}{1 - \varepsilon p} \right].$$

If the pre-merger PCM were 20% and the other parameters the same as in the text, costs would have to fall 2.56% for the merger to increase welfare

One gets a similar result if the benefit of the merger—or collusion or other anticompetitive conduct⁵—is an increase in product quality. To see this, hold production cost constant. Define P , Q , and ΔQ as above, and let $q = \Delta Q/Q$. With an increase in product quality, reflected in value by an increase in willingness to pay (WTP), prices can rise as a result of the nominally anticompetitive activity, but ΔQ , the reduction in output from the activity, could be negative, i.e.,

⁵ How best to characterize other anticompetitive conduct, particularly exclusionary conduct classified as “monopolization” under U.S. antitrust law and “abuse of dominance” elsewhere, is controversial (Brennan, 2007).

output could increase. If so, welfare unambiguously rises. If not, the condition for whether welfare falls depends on the average increase in WTP for the quality increase over the sales that take place after the merger or other antitrust event. Define that average WTP as S , and let $s = S/P$ be that increase as a fraction of the original price.

Welfare increases, even if output falls, if

$$s > \frac{1}{2} \left[\frac{q^2}{1-q} \right] \frac{1}{\varepsilon}.$$

This expression is identical to the condition for a cost reduction, since in that setting $q = \varepsilon p$.⁶ Thus, the likelihood that the benefit from a dynamic effect—here product quality—exceeds the static welfare loss from the output reduction, if there even is one.

5.1.2 Static as short-run; dynamic as long-run

The position of the proponents of the relative triviality of static concerns likely has to do explicitly with the short-run nature of an anticompetitive welfare loss versus the long-run nature of the gains from innovation. However one models the comparison, the fundamental argument regarding the static/dynamic tradeoff would, at its core, resemble the following: Let WL be the welfare loss from allowing anticompetitive conduct, which could be prevented with antitrust enforcement.⁷ Let IG be the net innovation gain that might accrue if that welfare loss is allowed to take.⁸ Define $r > 0$ as the

⁶ Here, the change in price is not a shift along a demand curve, because the demand curve itself changes with the change in willingness to pay.

⁷ Enforcement is here assumed costless both administratively and in other side effects to the economy; with enforcement, the gross benefit is 0, and the net benefit is avoidance of WL .

⁸ For ease of exposition, I do not model R&D expenses explicitly.

discount rate, in that a dollar worth of benefits in year t is worth e^{-rt} dollars today. Finally, let ϕ be the probability that an innovation generating benefits IG at time T would take place if competition enforcement allowed the welfare loss to take place. In this scenario, until time T , the economy suffers the welfare loss WL . With probability $1 - \phi$, WL exists in perpetuity.

The risk of a welfare loss from not enforcing competition laws in order to achieve a possible future innovation gain is worth taking if the gains exceed the losses.

$$\phi \left[\int_0^T -WLe^{-rt} dt + \int_T^\infty IGe^{-rt} dt \right] > [1 - \phi] \int_0^\infty WLe^{-rt} dt .$$

This inequality holds if and only if

$$\frac{IG}{WL} > \frac{e^{rT}}{\phi} - 1 .$$

This relationship supports a number of intuitions. The size of the innovation gain relative to the welfare loss necessary to warrant non-enforcement increases with the discount rate r and the time T until the innovation takes place (the present value of the innovation gain falls), and also as the likelihood of the innovation (ϕ) falls. If innovation is certain and immediate ($\phi = 1$, $T = 0$), any positive innovation gain justifies non-enforcement. If $r = 0$ (no discounting), the minimum IG/WL is $1/\phi - 1$, which with $\phi = .25$ would be 3.

A more significant gain dynamic efficiency proponents could invoke is that the innovation gain itself would grow exponentially while the welfare loss would not. Let s be the rate of growth in the innovation gain over time, once IG is achieved at time T with probability ϕ after incurring constant welfare loss WL . The condition for expected dynamic efficiencies to outweigh static costs becomes

$$\phi \left[\int_0^T -WL e^{-rt} dt + \int_T^\infty IGe^{s[t-T]} e^{-rt} dt \right] > [1 - \phi] \int_0^\infty WL e^{-rt} dt.$$

This condition is satisfied when

$$\frac{IG}{WL} > \left[\frac{e^{rT}}{\phi} - 1 \right] \frac{r - s}{r}.$$

The effect of growth in the innovation gain is to reduce the size of the innovation gain IG necessary to justify non-enforcement, incurring the welfare loss WL , by the factor $[r - s]/r$. This effect could be dramatic, in that as s approaches r , IG/WL could become less than 1. IG at any time could initially be below WL , but the prospect of its growth justifies non-enforcement. If $s > r$, the present value of the gains from innovation would be infinite, eliminating any justification for antitrust for any finite welfare loss.

This is clearly a simplistic and extreme case, in that the representation is biased in favor of dynamic benefits simply by applying a growth rate to innovation gains that is not applied to welfare losses. Even with that, however, these arguments require an implicit causation—that for the innovation gain to be realized, the welfare loss has to occur. We consider three such (non-mutually exclusive) hypotheses below.

5.2 “Static” perfection as the enemy of the “dynamic” good: Three hypotheses

5.2.1 Innovation requires monopoly profit

One hypothesis is that it is the monopoly profit that secures the incentive and ability to innovate. This is not a special argument; it is

largely the rationale for granting exclusive patent rights. However, as noted recently in a U.S. Supreme Court decision,⁹ a patent in and of itself does not convey the market power necessary for monopoly profits; for example, there may be patented or non-patented substitutes. A second is that the profits are necessary not just as an inducement but as an input, because of imperfections in capital markets due to asymmetric information between the borrowers (who know the prospects for success) and lenders (who do not).¹⁰

The question is whether antitrust enforcement itself could constrain profits that might otherwise stimulate innovation. Segal and Whinston (2007) offer a recent model addressing just this question. They posit an incumbent and an entrant. At any given period, the entrant (but not the incumbent) decides how much R&D to undertake, with the probability of success a concave function of the expenditure. If the entrant succeeds, it first gets to compete with the monopolist in the present period, and gets to be the monopolist in the next period, with the game starting over, retaining the same parameters for R&D cost and monopoly profit.

Antitrust enforcement determines the degree to which the incumbent can otherwise deter an entrant with successful R&D from entering. (How that determination is made is outside the model.) This has two effects on the incentive to undertake R&D. Enforcement can increase the profitability to the entrant of first period competition with the incumbent if the entrant's R&D is successful, increasing the incentive for R&D. In the other direction, enforcement reduces the profitability of being an incumbent, reducing the reward for successful R&D.

⁹ *Illinois Tool Works Inc. et. al. v. Independent Ink, Inc.*, 547 U.S. ____ (2006), available at <http://www.supremecourtus.gov/opinions/05pdf/04-1329.pdf>.

¹⁰ This is akin to arguments for failures in the market for student loans and, in the competition context, as arguments for why a prior deep pocket may be necessary to fund short-term losses from predatory pricing (e.g., Bolton and Sharfstein, 1990).

With these as the two effects, it is not surprising that antitrust enforcement can promote or discourage innovation. The model presumes that the present value of the increase in profits to an entrant in the first period exceeds the expected losses in profits if that entrant's innovation were to succeed and it became the incumbent monopolist in the second period. The model at least suggests, if not directly implies, that one would get maximum innovation if the firms were allowed to maximize their discounted profits together, e.g., collude.

The model suffers from a number of limitations. It is highly stylized, with innovation doing little more than switch the identity of the incumbent and entrant. Product pricing and consumer welfare are not modeled, so the model provides no insight as to whether additional innovation is worth the cost or is more akin to a wasteful patent race.¹¹ Only the entrant undertakes R&D in the model, so the possibility of defensive innovation by an incumbent to pre-empt competition from an entrant either by beating the entrant to the next innovation (Gilbert and Newbery, 1982) or filling up the space of products (Schmalensee, 1978) is not included.¹²

5.2.2 Innovation requires monopoly structure

A hypothesis with longer standing in economics is that a monopoly market structure is necessary to promote innovation. Monopoly structure creates monopoly profits, necessary for providing an incentive for investment, as just noted. A second argument, more on efficiency of innovation rather than output itself, is that multiple

¹¹ It is for this reason that the optimal outcome is collusion, since only the rate of innovation matters.

¹² Gilbert (2007) looks at claims that innovation is itself anticompetitive, e.g., predatory, and concludes that the high costs of deterring beneficial innovation suggest that innovation should be legal unless a "sham," i.e., has no plausible efficiencies.

seekers of R&D will dissipate the benefits of R&D through wasteful patent races (Scotchmer, 2004 at 112-14); the prospect of being the loser in such a race may lead (particularly risk averse) firms from participating in the game.

Likely most important is that a monopoly structure may facilitate the appropriation of returns for investment in innovation (Levin et. al., 1987).¹³ Fences around intellectual property have holes, some of which are intentional features of the design. For example, to obtain a patent in the U.S., an applicant must make available to the public the details of the design of the product or process for which one is staking a claim. Hence, others may be able to make use of the ideas to come up with non-infringing designs. Perhaps the most important by-product of disclosure is the simple removal of the barrier of imagining that a product or process doing the claimed task could be developed. Moreover, the validity of the claim is itself uncertain (Lemley and Shapiro, 2005), even if granted by the patent office, leading to potential leakage. Efforts to respond to that uncertainty by settling suits by X that Y infringed X's patent or from Y that X's patent is invalid are controversial, viewed by their opponents as extending patent rights through collusion (Shapiro, 2003) and by their supporters as reducing litigation (McDonald, 2003).¹⁴

Katz and Shelanski (2006) provide a useful review of the research in the context of merger enforcement. The theoretical controversy

¹³ This underlies the argument that R&D requires scale economies, which may be inconsistent with a competitive market structure. While the outcome of R&D may be scale economies because the intellectual property is a fixed input into a production process, scale economies are not necessarily a precursor for innovation absent the inability to appropriate returns or one of the other causes listed in the text.

¹⁴ The courts in the U.S. have ruled against the antitrust enforcement agencies and in favor of those advocating a permissive stance toward settlements. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056 (11th Cir. 2005), *cert denied*; *In Re Tamoxifen Citrate Antitrust Litigation*, 429 F.3d. 370 (2d Cir. 2005).

arises because competition can also be a spur to innovation (Baker, 2007). Arrow (1962) noted that competitive industries might be more innovative as far as cost reductions are concerned because they have a greater level of output over which cost reductions may be realized. In addition, all else equal, the marginal profit to a monopolist from innovating in its own market will be less than that of a firm in a competitive market, since the former loses its monopoly profit while the latter suffers no such loss. On the other hand, if the monopolist retains a monopoly if it innovates while an entrant faces duopolistic competition with the monopolist if it succeeds, the monopolist has a greater incentive to innovate since monopoly profits exceed duopoly profits, and may in fact spend too much on innovation simply to protect its monopoly (Gilbert and Newbery, 1982).

Because of theoretical controversies, this is an empirical question. As Katz and Shelanski's recent review points out—see also Gual (2007)—the dominant empirical finding has been that innovation is least likely with atomistic and monopolistic market structures, and more likely with some oligopolistic concentration in-between, taking an “inverted U” shape. However, reverse causation (innovation potential determines concentration levels) or mutual causation (factors such as technological opportunity may be correlated with concentration and innovation) render empirical findings a poor guide. One should infer cautiously, if at all, that as a general rule allowing concentration would promote innovation.

Caution is also warranted for at least a second reason. Most discussions of innovation proceed from the presumption that more innovation is always better than less. These need not be the case; the economic question should be whether at the margin the benefits from increased innovation exceed the costs. The answer could be negative for at least three reasons. Two, patent races and preemptive patenting to deter entry, have been noted. A third is that the rewards for entry, through innovation or any other expenditure of fixed costs, may come from transferring profits from incumbents, without any gain in social welfare (Mankiw and Whinston, 1986). It is possible

that even if otherwise anticompetitive market structures promote innovation, they may not promote efficiency.¹⁵

5.2.3 Innovation is promoted by higher prices for substitutes

A third possibility is that when two products are partial but not necessarily close substitutes, the low prices produced by competition in one market can impede innovation in a market for a relatively distant substitute.¹⁶ The idea is that competition for X, by reducing the price of X, reduces demand for Y. This reduced demand for Y in turn reduces incentives to innovate in the market for Y. Hence, if one wants more innovation in Y, one should resist competition policies or other policies that would lead to lower prices for X. A recent specific argument along these lines, trading off low prices against innovation, has arisen in policy contexts, particularly with regard to Canadian telecommunications. Quigley and Sanderson (2005) argued that a cost of strict regulation of voice telephone pricing in Canada was responsible for a failure of innovation in wireless telephony. The evidence for the proposition was that Canada ranked third from the bottom among 24 OECD countries in the rate of innovation in wireless telecommunications.

This study may be faulted on a number of grounds. One could interpret a finding that Canada was third from the bottom in telecommunications as a statement about how much more efficient Canada provides wire-based telephone service compared to other

¹⁵ I thank Tommy Staahl Gabrielsen for making this observation at the Pros and Cons seminar.

¹⁶ I am being somewhat imprecise with the term “market” here. The idea is that a lower price of A may reduce the returns to innovation in B. It need not imply that providers of A would be in the same relevant antitrust market as set out in merger guidelines (e.g., U.S. Department of Justice, 1997), were two firms in B to merge.

OECD countries. The lack of market penetration in Canada may have something to do with a less competitive market structure in wireless, with two firms dominating the Canadian market versus the four or more active participants in many U.S. cities. Finally, in a market with innovators around the world, the likelihood that Canadian telecommunications policy affects rate of innovation is unlikely, perhaps for anything beyond specifically clever ways to market wireless service to Canadians.¹⁷

Although the specifics of this claim may be questioned, the proposition that low prices in one market may be stifle innovation in another cannot be dismissed as a matter of theory. However, note that it contradicts the above two arguments for suggesting that competition is opposed to innovation. The “theory of the second best” says that if the price in one market is too low, prices of substitutes should be too low as well. Applied here, if the price of X is too low because it depresses innovation in Y, then because Y is a substitute, the “second best” (or perhaps “first best”) policy to eliminate a distortion leading to inefficiently low innovation would be to *reduce* the price of Y. Note that this is in direct opposition to the other arguments, which are that *increasing* the price of Y increases the incentive to innovate, by increasing either present profits that could fund innovation or prospective profits that would induce it. This suggests that the advocates of weakening policies designed to ensure that markets are more competitive, either in action or outcome, may not be taking consistent positions. One would want innovation to be a substantive justification for weakening competition enforcement, not a rhetorical excuse.

¹⁷ For an example of innovative marketing with specifically Canadian appeal, see the Bell Canada “Frank and Gordon” beavers advertising campaign. Videos of the television advertisements are not available, but images are on the Bell Canada website, <http://www.bell.ca/home/>.

5.3 Implementation lessons from Microsoft cases

One reason to be more cautious regarding conventional antitrust enforcement when the rate of innovation may be at stake is that dealing directly with innovation in antitrust is not easy. The U.S. antitrust case against Microsoft offers some useful guidance. It provides some insight into the pitfalls of reducing a case about future innovation to an essentially static framework regarding exclusion of rivals from present software markets. It also provides a hypothetical framework to illustrate that when innovation is taken into account, some mergers that might seem innocent may be problematic. The prospects for innovation could make parties competitors in the future even if they appear to be in separate markets at present.

5.3.1 Monopolization: Hard dynamic cases cannot be disguised as easy static cases

Evans and Schmalensee (2001 at 4) have described the U.S. Microsoft monopolization case as “the leading antitrust case involving a new-economy industry,” where “the defining feature of a new-economy industries is a competitive process dominated by efforts to create intellectual property through R&D, which often results in rapid and disruptive technological change.” They (2001 at 2) contrast these with “old-economy industries,” in which “competition takes place primarily through traditional price/output competition *in* the market and through incremental innovation, not through efforts to create drastic—market-destroying—innovations [emphasis in original].” In their view, the Microsoft case was a mistaken attempt to interfere in a Schumpeterian process of competition through successive innovation, driven by the monopoly profits that would be temporary at best.

The government plaintiffs in the U.S. case portrayed Microsoft as engaged in a practice to stifle this kind of successive innovation

(Brennan, 2001). The threat to Microsoft's monopoly in personal computer operating systems came from Netscape's web browser. Combined with the Java applications support software, Netscape could, on this account, provide an alternative to Microsoft as a platform on which applications would be run. The applications would not be stored on the user's computer; rather, they would be accessed as needed through an Internet connection to the servers on which they resided.

A monopolization case along these lines would have been a valuable contribution, not just to the specifics of antitrust law, but in clarifying how the complex issues surrounding dynamic competition can usefully be incorporated into competition policy. Such a case, however, would have required evidence to establish a number of propositions, each inherently difficult because of its dynamic nature (Brennan, 2004). A first would be to define and identify competitive circumstances in the future relevant market for application platforms in which successors of Microsoft and Netscape would compete in the future, as they were not presently direct competitors in operating systems. Perhaps other technologies, such as smart phones or broadband access devices, might offer services consumers would view as similar.

If that were established, one would then need to define the chain of events in which presence in the market at the time the case was litigated would create a competitive advantage in participating in the market. Depending on how that market would function, this competitive advantage could be in a Schumpeterian competition for the market or by developing simultaneous competitive presences in that market. With that route established, one would then need to show that the then Microsoft and Netscape offerings were sufficiently important routes to that presence that joint control over both, or elimination of one, would lead to monopolization of that future application platform market.

The phrase "would have" is appropriate because the case did not follow that path. Instead, the plaintiffs opted for a static case based narrowly on Microsoft's alleged efforts to impede Netscape's ability

to distribute its browser (Brennan, 2007, 442-44). An indication of the static nature of this approach is that the market in which Microsoft held a monopoly was defined by the plaintiffs to be “Intel-based PC operating systems,” a product that Netscape did not provide and, on a dynamic account, was never going to provide.¹⁸ In effect, the plaintiffs showed at most that Microsoft monopolized the market for distributing browsers, impeding Netscape’s market presence to the benefit of Microsoft’s Internet Explorer browser.

This reduction of a difficult dynamic case to an easy static case had at least three consequences. First is the foregone opportunity to clarify how monopolization or abuse of dominance law should work in dynamic or “new-economy” industries characterized by Schumpeterian competition. Second, avoiding the hard work of a dynamic case undercut the basis for consequential relief, e.g., forcing Microsoft to divest or grant independent development control over its browser. Instead, the plaintiffs had no basis for relief beyond elimination of the contracts that gave Microsoft control over the market for browser distribution outlets. Third is that allegations involving control over distribution of other forms of software, e.g., media players, are held (by some commentators)¹⁹ to an inappropriate dynamic standard, when they should be brought only as straightforward static exclusion cases.²⁰

¹⁸ A separate question outside the scope of this paper is the degree to which it is helpful in a monopolization case to prove that the alleged monopolizer already possessed market power prior to undertaking the alleged anticompetitive conduct (Brennan, 2001; 2007).

¹⁹ Evans and Schmalensee (2001) fall on one side, Ayres and Nalebuff (2005) on the other.

²⁰ This is not to pass judgment on the factual support for such cases and the weight of countervailing efficiency arguments. The observation concerns only the nature of the case, not its merits.

5.3.2 Mergers: Innovation need not reduce the justification for intervention

The intuition behind the view that dynamic innovation reduces the need for concern with static market power in monopolization cases would presumably extend to mergers. The models sketched above, which elicited some conditions when a long-run gain from innovation would outweigh a short-run loss, was derived from analyses of the tradeoffs between efficiencies and welfare losses in merger cases. Together, these suggest that innovation may justify less attention to mergers in two related ways.²¹ First, the potential for innovation may mean that the process of defining and identifying participants in a relevant market may be but a snapshot neglecting the possibility that other firms are likely to come up with goods and services that compete with those offered by present providers. Second, even if the snapshot is accurate, the competitive effects of the merger may be limited because innovation will accelerate entry in response to any attempt to significantly increase price.

These intuitions that innovation makes mergers less troublesome need not hold in general. An initial consideration is that innovation may lead to gross substitutes—new goods and services that lead many consumers to drop old ones—but not marginal substitutes, where the degree of shifting depends upon the prices of the old products. The former may change the size of the market, by shifting demand to the new product. It need not change the degree to which a merger among providers of the old product, which is essentially a function of the (in)elasticity of demand, not its magnitude.²²

²¹ The following discussion comes from informal work done for the Canadian Competition Bureau during 2006, while I served as the T.D. MacDonald Chair in Industrial Economics. These views do not necessarily reflect those of the Bureau, the Commissioner of Competition, or any of her staff.

²² Formally, let $q(p, z)$ be the demand for product q at price p , where z represents a demand shift parameter reflecting the attractiveness of

Television and radio provide a useful illustration. The innovation that created the former undoubtedly depressed demand for the latter, but those who still demand radios are probably sufficient resistance to price changes to make collusion or monopolization of that market profitable. A merger that would create a monopolist over radios would be unlikely to pass the scrutiny of competition law enforcers simply because there are televisions.²³

Aside from care regarding the difference between gross and marginal substitutes, taking innovation into account could make mergers more problematic rather than less. The arguments are

substitutes, implying both q_p and q_z are negative. The elasticity of demand at price p , $e(p, z)$, is $q_p p / q$. Demand becomes less elastic at p with an increase in z , the attractiveness of substitutes, if $e_z > 0$ (elasticity falls in absolute value). This holds if, holding p constant,

$$\frac{q_{pz}}{|q_p|} > \frac{|q_z|}{q},$$

i.e., the slope of the demand curve falls in percentage terms more than the change in demand from the entry of the gross substitute. An example where this holds equality, i.e., $e_z = 0$, is when

$$q = \frac{a - p}{bz},$$

where entry of a gross substitute rotates the demand curve around the intercept on the price axis. Intuitively, if gross substitutes take a greater share of demand from those with low reservation prices for the product than from those with higher reservation prices, a gross substitute would make demand less elastic despite demand falling overall, and thus could make a merger more problematic, not less.

²³ It remains to be seen whether at a small scale the proposed merger of the two North American satellite radio providers, XM Radio and Sirius, will escape opposition because of the presence of competition from both old technology (conventional radio) and new (Internet radio, iPods and music downloads). For contrasting perspectives, see Sidak (2007) opposing the merger and Hazlett (2007) in favor of allowing it to proceed. Both authors note that their work was financially supported by parties to the merger or interested in its outcome.

parallel to those supplying the intuition that innovation may make otherwise troublesome mergers benign. With regard to market definition, innovation may put firms that presently do not offer substitutes into the same market, converting an apparently non-horizontal merger into one where competition may be suppressed. With regard to the effect on competition, innovation may be a dimension beyond other than raising prices or reducing output where competition may be suppressed.²⁴

The Microsoft case provides an indirect example of these possibilities. Assume that the theoretical basis for the plaintiffs' case was sound, i.e., that Microsoft and Netscape would be competing against each other either in a future application platform market, either simultaneously or to become the dominant platform as Windows had been up to the time the case was filed. However, instead of Microsoft allegedly trying to drive Netscape out of the market in the late 1990s, suppose that Microsoft and Netscape had proposed a merger in the mid 1990s.²⁵ To make the example cleaner, suppose that Microsoft had not developed Internet Explorer, so there was no issue of an existing horizontal merger among browsers.

²⁴ We do not here address the controversy of whether the best way to analyze effects on innovation is through the use of "innovation markets" (Gilbert and Sunshine, 1995). U.S. enforcement agencies take this approach, while the Canadian Competition Bureau has explicitly rejected it, stating that any effects on innovation will show up as reduced output or higher prices in specified product markets (Canadian Competition Bureau, 2000 at 11). The underlying economics are not in dispute; the question is primarily which approach will lead to the least error from false positives (blocked mergers that are benign) and false negatives (allowed mergers that are harmful) in the legal and administrative process for determining which mergers can proceed. López (2001) offers a stronger critique of "innovation markets" based on a view that industry dynamism renders antitrust inefficient.

²⁵ A recent report on mergers and innovation prepared for the Canadian Competition Bureau employed this hypothetical (Tupperman and Sanderson, 2007, n. 48 and accompanying text.).

From a static perspective, this merger presents no apparent problems, as it would be vertical (operating systems and browsers), and given scale economies and network externalities in both markets, likely would mitigate double marginalization (Tirole, 1988 at 174-76). From a dynamic perspective, according to the case, things appear much different. The prospect of innovation in browsers and application support software, along with complementary developments in higher speed Internet connections, would make these two enterprises future participants in the application program market. Despite static appearances, they may well have been in the same (future) relevant antitrust market, and the merger could have created a monopoly in that market. On the effects side, the merger might have slowed down independent innovation efforts on the part of Netscape to establish a server-based application sector and on Microsoft's part to improve its operating systems to keep customers using desktop-resident programs.

In either case, if the concerns motivating the monopolization case were justified, potential software innovation would have turned a seemingly benign and perhaps efficient vertical merger into a problematic horizontal merger. Innovation, thus, is a two-way street. It may render static concerns trivial, but it may establish dynamic concerns that a static analysis may miss.

5.4 Looking outside antitrust non-enforcement to promote innovation

The Microsoft-based examples concern how antitrust practice might need to be adjusted to take innovation into account. They do not address the core claim that antitrust impedes innovation by restricting profits, preventing market concentration, or inhibiting high prices. One cannot disprove the contention on its face, especially in light of results suggesting that market-wide cost saving or long-term innovation gains can significantly outweigh direct or short-run welfare losses from higher prices. These arguments do not

in and of themselves prove that weakening antitrust is a desirable tactic for addressing putative shortages in innovation. To understand why one might think otherwise, one can turn to insights from macroeconomics and the economics of law, as well as intellectual property and industrial organization.

5.4.1 Multiple objectives; multiple tools

One of the fundamental lessons of macroeconomics, derived from basic linear algebra, is that addressing N policy objectives requires N policy instruments. From textbook examples, if all one wants to do is reduce unemployment, one could rely solely on fiscal policy, e.g., increasing government spending to boost demand. On the other hand, if one is concerned also with inflation, one needs to tend to the money supply. Concerns with exchange rates or foreign borrowing introduce provide reasons for treating the size of the deficit as a separate objective from the size of public spending. Yet another policy goal, the provision of public goods requires attention to how that spending is allocated.

The argument that competition law enforcement fails to take innovation seriously, suffers from a failure to learn this lesson. It neglects the possibility that there are multiple policy objectives. One is to maximize short-run economic welfare through protecting against anticompetitive collusion, mergers, exclusion, or predation. A second is to promote the efficient level of innovation. The analytical failure of the “new economy” critics is to neglect the possibility of applying a separate, second instrument to achieve this objective without necessarily impeding the goals of antitrust enforcement.

The obvious such instrument is intellectual property policy itself. Patent law in particular has at least third dimensions on which it

might be strengthened (Scotchmer, 2004).²⁶ One is the duration of the protection afforded by the patent, presently in the U.S. generally twenty years from the time of first filing. A second is the breadth of the patent in the metaphorical “product space,” increasing the degree of differentiation necessary for a succeeding invention to not infringe the prior patent. A third would be to extend coverage of patents, reducing the standard for novelty and non-obviousness necessary to obtain a monopoly over production.

Extending patent protection is not a perfect remedy. To the extent that subsequent innovations require access to prior ones, policies to increase the scope of patents today could reduce the supply of patents tomorrow (Scotchmer, 2004 at ch. 5). In addition, in many sectors of the economy, patent protection is a relatively unimportant device for engendering innovative activity; as first mover advantages, trademarks, and difficulty in reverse engineering all may play more important roles (Levin, et. al., 1987). In addition, other instruments for promoting innovative activity exist, including investment tax credits, accelerated depreciation and, as noted above, prizes. Before one decides to weaken antitrust to secure innovation, one might examine IP laws or other policy tools to see if they are systematically providing too little incentive consistent with protecting competition.

5.4.2 Buchanan and Stubblebine, following Coase

If patent law and other IP laws are providing optimal incentives to innovate, or to the extent that one is unable to make a plausible case that they provide too little protection on a systematic basis, distorting competition enforcement will not only produce static inefficiency, but will over-reward innovation. Ideally, IP laws provide incentives so that the expected marginal social benefit from

²⁶ For a general discussion of why intellectual property is an attenuated rather than expansive form of property protection, see Brennan (1993).

more innovation just equals its marginal cost. If antitrust is weakened to stimulate more innovation, an economy will end up with too much of its resources devoted to innovative activity.

This insight arises from one of the earliest observations in the modern study of the economics of law. Coase (1960) showed that, contrary to the then standard view that externalities required ameliorating taxes, agents in an economy could achieve efficient outcomes as long as there were no costs to undertaking the transactions necessary to get to those outcomes. Buchanan and Stubblebine (1962) subsequently showed that if transaction costs are sufficiently low for parties to achieve efficient outcomes, a tax on the putative externality would distort the costs and benefits facing the Coasian negotiators, distorting the outcome.²⁷ The lesson is for competition policy in the innovation context is the opposite of the “theory of the second best”: If one market is not distorted, one should not distort another in an effort to compensate.

5.4.3 IP analytical practicality

A third consideration, albeit perhaps more methodological than empirical, arises in how to undertake theoretical assessments of changes to IP rules. Suppose, for example, that one wanted to look at the effects of changes to fair use policies. A relevant exercise would be to look in a static way at changes in the behavior of buyers and

²⁷ In their analysis of compulsory copyright licenses, Besen, Manning, and Mitchell (1978) showed that if the “tax” is paid directly to one of the negotiators, Coasian negotiators could negate the effects of the tax and achieve an efficient solution. Economic harm of an extraneous compulsory license requires high transaction costs. Such transaction costs, however, could justify having legislatures or courts set prices. “Fair use” policies that allow free uses of intellectual property in specific contexts may be viewed as responses to transaction costs exceeding the benefit of setting a positive price (Gordon, 1982; Brennan, 1986).

sellers in the market for intellectual property when one moves from positive to zero prices (Brennan, 2005). That exercise may be difficult enough. But one could, in principle, extend the analysis to the entire IP enterprise. One could look at fair use rules or other policies not just in terms of their effect on the market at hand, but also in terms of the overall rate of innovation.

This is analytically impractical and likely to lead to poor policy making. To look at specific aspects of IP policy, one should as a methodological matter treat the overall scheme of IP as efficient, and focus on first-best adjustments in the policy context at hand. The matter is not just one of analytical convenience, but of efficient policy making. To do otherwise is, in effect, to use some relatively specific policy—fair use, taxing recording media (Brennan, 1988)—as a means to change the overall structure of IP. If one thinks that IP rights are insufficient or excessive, one could address that problem directly by extending or reducing the duration of the patent or its coverage in product space.

Recall Adam Smith's famous observation that "the division of labor is limited by the extent of the market." The "extent of the market" for analyzing IP is large enough to allow a division of labor, addressing each problem on its own, and leaving the "big picture" to direct fixes. This "division of labor" principle applies to competition policy.²⁸ Better to have competition agencies worry about

²⁸ A related concern is that with productivity. As one who has spent a career working from a microeconomic, industrial organization perspective, my presumption regarding productivity is that once market failures are addressed, including those having to do with both competition and intellectual property rights, the rate of productivity is whatever it is. Innovation itself is intrinsically unpredictable; the best we can do is fix microeconomic impediments to efficient investment. That perspective contrasts with the macroeconomic concern that productivity is "too low" in historical terms, and merits concern apart from fixing underlying microeconomic problems.

competition—and IP agencies focus on innovation—rather than to have the former engaged in the latter as well.²⁹

5.4.4 Distorting presently competitive markets

Although in some sectors innovative activity may be correlated to some degree with scale economies that might motivate mergers or justify collusive arrangements, the literature surveyed above does not confirm a sufficiently strong causal connection between concentration and innovation to allow an inference that violating competition law signals a propensity to innovate. Consequently, a final observation is that if dynamic considerations trump static efficiency, then the principle need not hold only in those contexts that happen to be the subject of an antitrust investigation. The tension between static competition and dynamic efficiency is a general, economy-wide proposition.

If so, we have two policy options. On the one hand, policy makers could distort all markets, e.g., make them less competitive, perhaps by mandating and enforcing collusive agreements, in order to restore appropriate incentives for innovating. Quigley and

²⁹ It may be helpful to consider a similar “division of labor” example, involving externalities. One might argue that an anti-competitive merger of oil or electric companies would, by reducing output, reduce carbon emissions and expected costs from global warming. However, it is likely to harm both competition and the environment if competition authorities attempt to incorporate greenhouse gas emissions into their legal assessments, and if environmental policy makers are relying on competition law rather than more direct policies, such as emissions taxes or tradable permits, to achieve desired objectives.

In light of other presentations at this seminar, a similar point may apply to having antitrust or competition agencies specialize in enforcing laws and policies to make markets more competitive, and have regulatory agencies (sector-based or general) specialize in policies to impose and manage price controls to prevent exploitative high pricing.

Sanderson's (2005) contention that regulation should allow higher than efficient prices for telephone service, in order to encourage innovation in wireless, would apply equally if the telephone market were competitive and not regulated. On that account, those who believe dynamic benefits trump harms to competition should not just tolerate otherwise anticompetitive collusion, mergers, or monopolization. They should encourage such practices even if the sector were not so inclined to engage in them, to support innovation goals.

On the other hand, IP laws could be designed to encourage innovation as if the underlying markets are competitive, leaving competition enforcement to its traditional range of activity. Since those laws have evolved over more than a century in a context in which most markets are reasonably competitive most of the time, one might conclude with appropriate caution that IP rules are appropriately designed instruments for innovation when markets are competitive. If so, we could presume that those laws and regulations would be roughly optimal for those industries where deviations from competitive performance are reversed or deterred through competition law. IP law is thus the instrument to accompany ever-evolving antitrust law, which remains the appropriate policy instrument for achieving the goals of competition.³⁰

5.5 What should we do? Follow existing practice

In the terms of the title of this volume, a suggested "pro" of high prices is that efforts to toward them by making markets more competitive in a static sense stand in the way of innovations that

³⁰ Such goals, of course, can vary across jurisdictions, in terms of whether the objective is consumer welfare, total welfare, distributive justice (another policy better addressed through straightforward tax and welfare policies), protectionism, and small enterprise promotion.

would bring substantial dynamic efficiencies. Very simple models illustrate that the benefits of innovations that cover an entire market (e.g., by reducing costs) or generate long-run gains can outweigh welfare losses from output reductions that may last only a short time. Arguments that dynamic benefits trump static harms imply that an anticompetitive market structure is necessary to generate profits to encourage innovation, facilitate appropriation of benefits, or by stimulating demand for substitutes.

As actual and hypothetical examples based on the Microsoft litigation point out, however, incorporating innovation into competition cases should not be reduced to static cases, but may also raise concerns that a purely static approach may miss. Innovation need not render antitrust less necessary, but more. Most important, advocates of the view that antitrust should be weakened to reflect “new economy” concerns miss the point that intellectual property law exists as an instrument for that purpose. It may well have evolved to best balance costs and benefits of encouraging innovation when industries are competitive. To suggest otherwise implies that anticompetitive conduct should be encouraged in competitive markets, not just tolerated where it happens to arise.

Where should competition agencies go from here? A “one size fits all” presumption regarding dynamic “trumping” static appears inappropriate. If dynamic concerns are the direct focus, the authorities should proceed as they do when concerned with reductions in output. Evidence will typically be more difficult to come by, as innovation by its very nature involves products and processes that have yet to take place. Policy makers and adjudicators are likely to lack direct present market information regarding the magnitude of potential costs and benefits. If an enforcement agency is predicated a case on a relevant market that depends on innovation, it should bear the burden of persuading a court that its market definitions and (unilateral or coordinated) effects stories are plausible. Courts, in turn, need to recognize that direct empirical evidence will be inherently difficult to obtain. In addition, as the Microsoft case in the US shows, reducing such cases to static ones, to

avoid having to meet these difficult evidentiary burdens, will lead to static-based remedies that may not address relevant dynamic concerns.

All that said, as the arguments motivating this discussion point out, there might be “pros” in higher prices or anticompetitive structures, in terms of inducing additional innovation. Although this seems to be a novel concern, it is in essence no different than any other efficiency defense for an antitrust practice. Under the U.S. Department of Justice and Federal Trade Commission’s Horizontal Merger Guidelines (1997, Sec. 4),

The Agency will consider only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects.

[T]he merging firms must substantiate efficiency claims so that the Agency can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm’s ability and incentive to compete, and why each would be merger-specific. Efficiency claims will not be considered if they are vague or speculative or otherwise cannot be verified by reasonable means.³¹

The same may be said for dynamic efficiency claims. Defendants in a competition case should be allowed to invoke those claims, but also be required to show that the dynamic effects are “unlikely to be accomplished” but for the practice and “substantiate” those claims so they are not “vague or speculative.” In particular, this would rule out simple assertions that “dynamic trumps static.”

These Guidelines also say that

³¹ The Guidelines go on to discuss when efficiencies would be counted, based on a consumer welfare rather than total welfare standard. We do not address practices based on those different standards here.

In the Agency's experience, efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great.

For innovation effects, this optimistic view is not likely to be justified. For defendants to show that a merger, collusive agreement, or abuse of dominance is outweighed by context-specific efficiencies, they essentially would have to show that absent the higher profits they would reap or the monopolistic structure they would create, innovation would not take place.³² This would run counter to claims that there are other potential innovators out there, or that this merger or agreement would prevent appropriability leaks that otherwise discourage innovation.

This suggests that to support a defense based on a uniquely effective ability to innovate, the defendants would, in effect, have to show that the merger, collusion, or practice leads to dominance if not monopoly in some relevant market, unless they can somehow show that other short-run competitors are not also reasonably effective long-run innovators.³³ They would then have to hope to be able to persuade authorities and courts that dynamic efficiencies outweigh the short-term static inefficiencies from the suppression of competition needed to substantiate the claimed dynamic benefits. The demand for a general rule that “dynamic trumps static” thus may be little more than a rhetorical strategy to make life easier for

³² For these purposes, an innovation market may be the better approach.

³³ Not only is this qualification unlikely, but in the US, it can go the other way. US competition authorities approved Boeing's acquisition of McDonnell-Douglas in the mid-1990s largely on the grounds that MD was not going to be making the R&D investments necessary to remain a viable large scale commercial aircraft manufacturer. Federal Trade Commission, “Statement of Chairman Robert Pitofsky and Commissioners Janet D. Steiger, Roscoe B. Starek III and Christine A. Varney in the Matter of The Boeing Company/McDonnell Douglas Corporation” (July 1, 1997), <http://www.ftc.gov/opa/1997/07/boeingsta.shtml>, accessed Oct. 11, 2007.

defendants. If, instead, defendants are forced to make such a showing in a specific merger, collusion, or monopolization case, the need to concede static anticompetitive effects will likely make such defenses rare. Any speculation, skeptical or otherwise, regarding the relationship between static and dynamic efficiencies, including those presented here, may remain more a matter for the ivory towers of academia than for the competition law enforcer.

References:

- Arrow, Kenneth (1962), *Economic Welfare and the Allocation of Resources for Invention*, in R. Nelson (ed.), *The Rate and Direction of Economic Activity*, Princeton: Princeton University Press.
- Audretsch, David, William Baumol and Andrew Burke (2001), *Competition Policy in Dynamic Markets*, *International Journal of Industrial Organization* 19: 613-34.
- Ayres, Ian and Barry Nalebuff (2005), *Going Soft on Microsoft? The EU's Antitrust Case and Remedy*, *Economist's Voice* 2, no. 2, article 4, available at <http://www.bepress.com/cgi/viewcontent.cgi?article=1045&context=ev>.
- Baker, Jonathan (2007), *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, Available at SSRN: <http://ssrn.com/abstract=962261>
- Barnett, Thomas (2007), *Maximizing Welfare Through Technological Innovation*, Presentation to the George Mason University Law Review 11th Annual Symposium on Antitrust, Washington, DC (October 31).
- Besen, Stanley, Willard Manning, and Bridger Mitchell (1978), *Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem*, *Journal of Law & Economics* 21: 67-95.
- Bolton, Patrick and David Sharfstein (1990), *A Theory of Predation Based on Agency Problems in Financial Contracting*, *American Economic Review* 80: 93-106.

- Brennan, Timothy (1986), *Harper & Row v. The Nation: Copyrightability and Fair Use*, Journal of the Copyright Society of the U.S.A. 33: 368-89.
- Brennan, Timothy (1988), *An Economic Look at Taxing Home Audio Taping*, Journal of Broadcasting and Electronic Media 32: 89-103.
- Brennan, Timothy (1989), *Regulating by 'Capping' Prices*, Journal of Regulatory Economics 1: 133-47.
- Brennan, Timothy (1993), *Copyright, Property, and the Right to Deny*, Chicago-Kent Law Review 68: 675-714.
- Brennan, Timothy (2000), *Vertical Excuses for Horizontal Practices: Should There Be Any Per Se Rules?* Antitrust Bulletin 45: 467-490.
- Brennan, Timothy (2001), *Do Easy Cases Make Bad Law? Antitrust Innovation or Missed Opportunities in U.S. v. Microsoft*, George Washington Law Review 69: 1042-1102.
- Brennan, Timothy (2004), *The Legacy of U.S. v. Microsoft*, Regulation 26 (no. 4): 22-28.
- Brennan, Timothy (2005), *Fair Use as Policy Instrument*, in Gordon, Wendy, Lisa Takeyama and Ruth Towse (eds.), *Developments in the Economics of Copyright: Research and Analysis* (Northampton, MA: Edward Elgar): 80-102.
- Brennan, Timothy (2007), *Saving Section 2: Reframing U.S. Monopolization Law*, in Ghosal, Vivek and Johan Stennek (eds.), *The Political Economy of Antitrust* (Amsterdam: North-Holland): 417-51.

Buchanan, James and W. C. Stubblebine (1962), *Externality*, *Economica* 29: 371-84.

Canada Competition Bureau (2000), *Intellectual Property Enforcement Guidelines* (Ottawa: Industry Canada), available at <http://strategis.ic.gc.ca/SSI/ct/ipege.pdf>.

Coase, Ronald (1960), *The Problem of Social Cost*, *Journal of Law and Economics* 3: 1-44.

Ellig, Jerry and Daniel Lin (2001), *A Taxonomy of Dynamic Competition Theories*, in Ellig, Jerry (ed.), *Dynamic Competition and Public Policy* (Cambridge: Cambridge Univ. Press): 16-44.

Evans, David and Richard Schmalensee (2001), *Some Economic Aspects of Antitrust Analysis in Dynamically Competitive Industries*, National Bureau of Economic Research Working Paper 8268.

Gilbert, Richard (2007), *Holding Innovation to an Antitrust Standard*, *Competition Policy International* 3: 47-77.

Gilbert, Richard and David Newbery (1982), *Preemptive Patenting and the Persistence of Monopoly*, *American Economic Review* 72: 514-26.

Gilbert, Richard and Steven Sunshine (1995), *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets*, *Antitrust Law Journal* 63: 569-601.

Gilbert, Richard and Willard Tom (2001), *Is Innovation King at the Antitrust Agencies*, *The Intellectual Property Guidelines Five Years Later*, University of California at Berkeley, Center for Competition Policy Working Paper No. CPC01-20. Available at SSRN: <http://ssrn.com/abstract=502783>.

Gordon, Wendy (1982), *Fair Use As Market Failure: A Structural and Economic Analysis of the. Betamax Case and its Predecessors*, Columbia Law Review 82: 1600-57.

Gual, Jorde (2007), *Time to Rethink Merger Policy*, Competition Policy International 3 (no. 1): 29-44. Available at SSRN: <http://ssrn.com/abstract=987093>

Hahn, Robert (2001), *Competition Policy and the New Economy*, Milken Institute Review 2001 (first quarter): 33-41.

Hazlett, Thomas (2007), *The Economics of the Satellite Radio Merger*, letter to the Federal Communications Commission, June 14, 2007, available at http://www.xmmerger.com/uploads/Hazlett_Paper_with_Transmittal_-_Final.pdf.

Heyer, Ken (2006), *Welfare Standards and Merger Policy: Why Not the Best?* Competition Policy International 2: 29-54.

Jorde, Thomas and David Teece (1992), *Innovation, Cooperation, and Antitrust*, in Jorde, Thomas and David Teece (eds.), *Antitrust, Innovation and Competitiveness* (Oxford: Oxford University Press): 47-81.

Katz, Michael and Howard Shelanski (2005), *'Schumpeterian' Competition and Antitrust Policy in High-Tech Markets*, Competition 14: 47, available at SSRN: <http://ssrn.com/abstract=925707>.

Katz, Michael and Howard Shelanski (2006), *Mergers and Innovation*, Antitrust Law Journal 74: 1-86. Available at SSRN: <http://ssrn.com/abstract=894346>

- Lemley, Mark and Carl Shapiro (2005), *Probabilistic Patents*, *Journal of Economic Perspectives* 19: 75-98.
- Levin, Richard, Alvin Klevorick, Richard Nelson and Sidney Winter (1987). *Appropriating the Returns from Industrial Research and Development*, *Brookings Papers on Economic Activity: Special Issue on Microeconomics* 1987: 783-820.
- Lewis, Tracy and David Sappington (1988), *Regulatory Options and Price-Cap Regulation*, *Rand Journal of Economics* 20: 405-416.
- López, Edward (2001), *New Anti-Merger Theories: A Critique*, *Cato Journal* 20: 359-78.
- Lorentzen, Jo and Peter Møllgaard (2006), *Competition policy and innovation*, in Bianchi, Patrizio and Sandrine Labory (eds.), *International handbook on industrial policy* (Cheltenham: Edward Elgar Publishing): 115-133.
- Macauley, Molly (2005), *Advantages and Disadvantages of Prizes in a Portfolio of Financial Incentives for Space Activities*, *Space Policy* 21:121-128.
- Mankiw, N. Gregory and Michael Whinston (1986), *Free Entry and Social Inefficiency*, *RAND Journal of Economics* 17: 48-58.
- Marvel, Howard P. and Stephen McCafferty (1984), *Resale Price Maintenance and Quality Certification*, *RAND Journal of Economics* 15: 346-59.
- McDonald, Kevin (2003), *Hatch-Waxman Settlements and Antitrust: On 'Probabalistic' Patent Rights and False Positives*, *Antitrust Magazine* 17, no. 2: 68-76.

- Quigley, Neil and Margaret Sanderson (2005), *Going Mobile, Slowly: How Wireline Telephone Regulation Slows Cellular Network Development*, C.D. Howe Institute, Toronto, Ontario, available at http://www.cdhowe.org/pdf/commentary_222.pdf.
- Schmalensee, Richard (1978), *Entry Deterrence in the Ready-to-Eat Breakfast Cereal Industry*, Bell Journal of Economics 9: 305-327.
- Scotchmer, Susan (2004), *Innovation and Incentives* (Cambridge, MA: MIT Press).
- Segal, Ilya and Michael Whinston (2007), *Antitrust in Innovative Industries*, American Economic Review 97 (forthcoming).
- Shapiro, Carl (2003), *Antitrust Limits to Patent Settlements*, RAND Journal of Economics 34: 391-411.
- Sidak, J. Gregory (2007), *Expert Declaration of J. Gregory Sidak Concerning the Competitive Consequences of the Proposed Merger of Sirius Satellite Radio, Inc. and XM Satellite Radio, Inc.*, Available at SSRN: <http://ssrn.com/abstract=977318>.
- Telser, Lester (1960), *Why Should Manufacturers Want Fair Trade?* Journal of Law and Economics 3: 86-105.
- Tirole, Jean (1998), *The Theory of Industrial Organization* (Cambridge, MA: MIT Press).
- Tupperman, Andrew and Margaret Sanderson (2007), *Innovation and Dynamic Efficiencies in Merger Review*, Competition Bureau, Industry Canada, available at <http://www.competitionbureau.gc.ca/internet/index.cfm?itemID=2376&lg=e>.

U.S. Department of Justice and Federal Trade Commission (1997),
Horizontal Merger Guidelines, available at
<http://www.usdoj.gov/atr/public/guidelines/hmg.htm>.

Werden, Gregory (2007), *Monopsony and the Sherman Act: Consumer Welfare in a New Light*, available at SSRN:
<http://ssrn.com/abstract=975992>.

Williamson, Oliver (1968), *Economies as an Antitrust Defense: The Welfare Tradeoffs*, *American Economic Review* 58: 18-36.

6 Excessive Pricing

Mark Williams

6.1 Introduction

The concept of abuse in European antitrust policy can be divided into exploitative abuses and exclusionary abuses. Exploitative abuses are those where a firm with market power sets prices and conditions that take advantage of the strong position of the seller (and the correspondingly weak position of the buyer) to ensure that an undue share of the gains from trade accrue to the seller. Exclusionary abuses are those where a firm seeks to engage in conduct to evict a rival from its market (or deter a rival from entering its market or expanding in the market), by engaging in pricing and/or non-price strategies that induce the rival to cease competing as effectively or at all.

Exploitative and exclusionary abuses are not necessarily mutually exclusive. Specifically, when a vertically-integrated firm sets an excessive input price to a downstream competitor, and implements a margin squeeze, the excessive price is exclusionary.

Equally, price discrimination will often include elements of excessive pricing – to those customers who are asked to pay a high price – and may also be a means of implementing predatory pricing, in which some customers are “targeted” with low prices.

In this paper we focus on excessive pricing as a stand-alone issue, separate from other antitrust questions such as price discrimination, margin squeeze or bundling with which it is often associated.

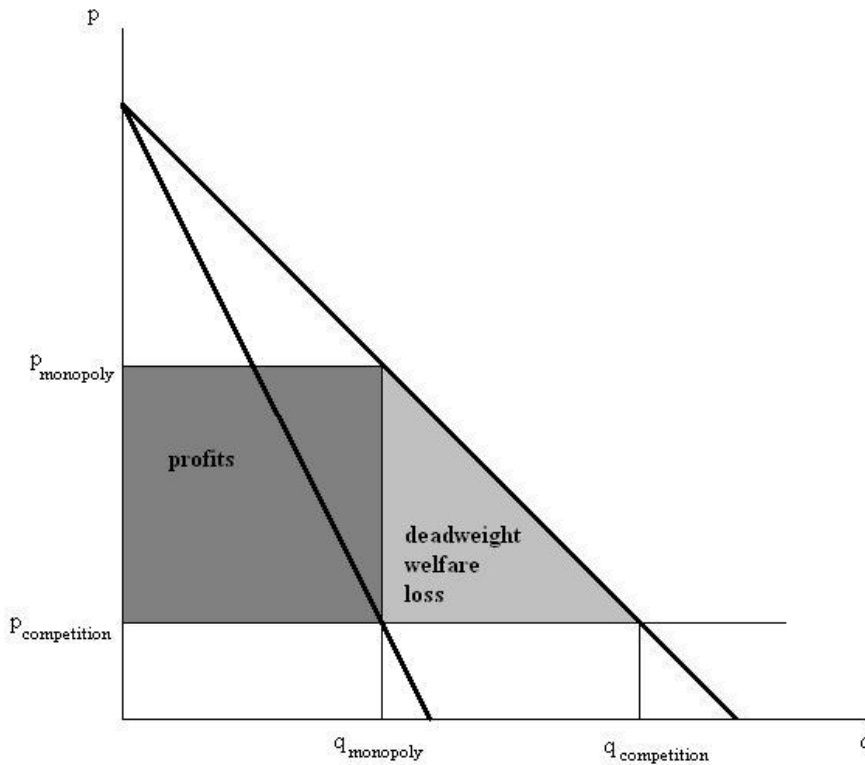
6.2 The Theoretical Foundations of Excessive Pricing Analysis in Competition Policy

Competition policy is motivated by the benefits to an economy of preventing the creation and exercise of market power, of which the extreme manifestation is monopoly power. The justification of competition policy as an instrument of economic policy must, therefore, somehow be grounded in the disadvantages and detriments that arise from monopoly power.

Economic theory shows that a textbook monopolist will increase its price above the level that would obtain in a competitive market, and allow output to fall to below the level that would be supplied by a competitive market. Indeed, in markets with a linear demand curve and where marginal cost is constant, monopoly output will be exactly half of the level that would be produced by a competitive market. This situation is illustrated in Figure 1.

The loss of surplus to all those consumers who would have bought at the competitive price but whose valuation of the good lies below the monopoly price is the “deadweight welfare loss” of monopoly, and this can be represented graphically by the shaded triangle that lies below the demand curve and above the marginal cost curve, between the monopoly output level and the competitive output level. The loss of surplus to those consumers that continue to buy, but at the higher price, is given by economic profit. This is represented by the shaded rectangle in Figure 1, and is not lost to the economy, but amounts to a transfer of surplus from customers to the monopolist.

Figure 1
Pricing Under Monopoly and Under Competition



The problems with monopoly pricing are therefore:

- the monopoly price (p_{monopoly}) is excessive compared to the competitive level ($p_{\text{competition}}$);
- some consumer surplus is transferred to the monopolist as producer surplus; and
- some loss of consumer surplus (the deadweight welfare loss) is not transferred to the monopolist but lost entirely, to society.

In this light, the prosecution of excessive pricing might be viewed as the “purest” of competition policy offences. Indeed, the

prevention of monopoly pricing is one of the key features of competition policy. For example, apart from very minor exceptions, horizontal price fixing by (supposed) competitors is universally condemned, presumably because its effects – the creation of a monopoly situation when a more competitive outcome would otherwise have occurred – are unambiguously against the consumer interest.

Equally, merger control seeks to prevent the creation *by merger* of market power. In short, a substantial part of competition policy as implemented in the real world is motivated by preventing the creation and exercise of market power, which would ultimately manifest itself by excessive prices.

Given the apparently fundamental role played by excessive pricing in motivating competition policy, it is perhaps surprising that the ex-post prosecution of excessive pricing – as opposed to deterring its occurrence via cartel or merger policy – remains a neglected area of competition policy. Indeed, the reality is that the pursuit of excessive pricing cases is quite rare, and the number of convictions of pure excessive pricing abuses – as opposed to a hybrid offence of which excessive pricing is a component – is modest.

Our focus on excessive pricing is, therefore, motivated by its fundamental conceptual position as the intellectual cornerstone of competition policy, rather than the frequency with which (pure) excessive pricing matters occur in the everyday practice of competition policy.

6.3 The Relevant Benchmark for Excessive Prices

The ECJ, in its *United Brands* judgment, held that the question in excessive pricing investigations is “whether the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the affirmative, to

consider whether a price has been charged which is either unfair in itself or when compared to other competing products".¹

In theory, such an assessment of excessive pricing might appear to be straightforward. The obvious approach is to compare price with some relevant cost measure, and if the gap between price and cost exceeds some level, the price in question can be deemed excessive. However, in practice, seeking to determine whether prices are excessive, and returns excessive, raises a large number of problems, both conceptual and of implementation.

In forming a judgment that a price is excessive, it is first necessary to set a *benchmark* against which the actual price can be compared. In addition, a methodology is required for assessing whether the gap between the actual price and the benchmark price is sufficiently great to be excessive.

From an economic point of view, a reasonable starting point is the premise that a *price* can be deemed excessive if, and only if, it allows the firm in question to make a *profit* that is excessive.² Price can normally only be thought of as excessive when compared to cost: a Rolls Royce may be rather expensive at £150,000, but if its cost of production is also very high, it is not meaningful to say that a Rolls Royce is excessively priced because it is dearer than a Ford Fiesta at £10,000.

However, there are various concepts of cost, and consequently also various concepts of profitability, including:

- the marginal cost of producing the unit in question (corresponding roughly to the profitability concept of a *gross margin*); but also

¹ Case 27/76 *United Brands v Commission*, paragraph 252.

² We note that in the presence of inefficiency, excessive prices would not necessarily lead to excessive profits.

- the overheads or fixed costs associated with production (which would be taken into account for calculating a *net margin*).

In the presence of fixed costs of production, it is not meaningful to describe a price as excessive because it exceeds marginal cost. By contrast, net profitability (which is essentially equal to total revenue minus marginal costs minus fixed costs) corresponds relatively precisely to the question at hand in an excessive pricing case.

That said, profitability is not entirely straightforward, for multiple reasons:

- First, accounting profit is often sensitive to the precise approaches of how to deal with depreciation.
- Second, many businesses are multiple-product businesses and data is only presented at an aggregate level in company accounts.
- Third, company accounts of international companies depend on transfer pricing arrangements.

In addition to these “practical” issues, there is also a fundamental conceptual issue. The profits as described in accounts are essentially the excess of revenues over cost, but where costs are typically defined to exclude capital costs. Of course, profits are often calculated both before and after interest, but even if the profits are post-interest, that only takes into account the debt element of capital structure, not the equity element.

Any business employs *capital*. At the time of a business start-up, this capital will constitute cash that has been invested in the shell of the business and which takes the form of *equity* capital (the purchase of newly issued *shares* in exchange for cash paid by investors to the company’s bank account) or *debt* capital (the purchase of newly issued *bonds* for cash by investors, where the cash is also paid into the company’s bank account). Thus, before the business commences

trading it will have a bank account containing a certain amount of cash equal to the *capital base* of the firm.

However, the firm is owned by its *equity* holders. These seek to obtain a return on the capital they have invested, and would hence eventually seek to withdraw their funds if there was no, or insufficient, reward. Therefore, a firm has a cost of equity, this being the return that the market needs to promise investors to induce them to hold equity. More generally, a firm that is financed by debt and equity has a *weighted average cost of capital* ("WACC") which is the return it needs to promise to debt and equity holders to induce their investment.

From an economic point of view (as opposed to an accounting viewpoint), a firm with a WACC of 10% that makes a profit equal to 10% of its capital base is defined as making "zero profits". That is, economists take the cost of capital as just another cost of the business (like rent and wages) and economic profits are only defined as existing if accounting profits exceed the cost of capital.

In what follows, we pursue the implications of this methodology. However, the resulting complications in determining profitability are not insignificant, and it will be seen that *in practice* a variety of measures and indicators for excessive pricing are used, and these often do not use profitability as the underlying criterion. We will also discuss these other criteria, although we will also argue that – notwithstanding decisional practice – few if any of these criteria can provide proof of excessive pricing, as opposed to providing preliminary indicators consistent with but not proof of excessive pricing.

6.4 The Cost of Capital

Assume a firm with an initial capital investment of £100 million of which £80 million is equity and £20 million is debt on a 10% interest rate. Suppose the company makes a profit in its first year of £12 million (and assume, for simplicity, the absence of corporate

taxation). As the company has issued £20 million of bonds bearing an interest rate of 10%, the firm has an obligation to make an interest payment of £2 million on those bonds. As a result of that payment, profit falls from £12 million to £10 million. The company can then decide how much of its £10 million profit to retain for future investment, and how much to pay out to shareholders as a dividend. Assume for simplicity's sake that it pays out all of the post-interest profit of £10 million as a dividend. The shareholders then receive a dividend totalling £10 million, where the total equity invested by shareholders was £80 million. In this first year, the return on equity capital employed of the shareholders is £10 million/£80 million, which amounts to 12.5%.

Note, however, that if the profit had only been £8 million, the bondholders would still have had to be paid the full £2 million of interest to which they were entitled, and that post-interest profits would then have been only £6 million, which gives a return on equity capital of £6 million/£80 million, which amounts only to 7.5%. Thus, bondholders receive a steady pre-determined interest rate (unless the firm falls into sufficient distress that it defaults), whereas shareholders are the *residual claimants* on profit and, therefore, receive a dividend income that is more volatile with respect to changes in profit.³

A common intuition is that shares whose returns are volatile require a higher rate of return to encourage investors to hold them, compared to shares whose returns are relatively stable. For example, a share that guaranteed a return of 10% is more attractive than one that will return either 15% or 5%, with 50% probability each. However, this intuition is incorrect. The reason lies in the recognition

³ It is also possible to calculate the *weighted return on capital employed of debt and equity*. If profit is £10 million, the overall weighted ROCE is 10% (£10m on a combined equity and debt base of £100 million). If profit is only £8 million, ROCE is 8%, but where bondholders receive 10% and equity holders receive only 7.5%, it can be seen that $(0.2 \times 10\% + 0.8 \times 7.5\%)$ comes out at 8%, the overall return.

that shares should be held in a portfolio, and that in a portfolio of shares it is possible to diversify risk. Within such a portfolio, some shares will do better than average and others worse than average, so that the volatility of many of the projects will tend to average out.

Specifically, some stocks in a portfolio may be negatively correlated. An ice cream company will find that its profits increase in a hot summer whilst an umbrella company will find that its profits fall. Accordingly, a portfolio holding both stocks, i.e. shares in the ice cream firm and also in the umbrella firm, will generate a more stable return than either stock individually. Since investors can insure against volatility of individual stocks simply by holding a diversified portfolio, it is clear that no extra return is required to compensate for the diversifiable risk.

However, after combining assets in a portfolio, that portfolio will still move up and down with the stock market. That movement corresponds to undiversifiable risk and has to be compensated for. However, different stocks will move up and down with the market to a greater or lesser extent.

The standard model for analysing the return required by investors to invest in a share is the *capital asset pricing model* ("CAP-M"). The key result of this model is that the required rate of return ("ROR") for a particular project is given by the equation:

$$\text{ROR} = \text{Risk-Free Interest Rate} + \beta * (\text{Market Return} - \text{Risk-Free Rate})$$

The *risk-free interest rate* is normally taken as the government bond rate. The term β is a technical parameter known as the *beta coefficient* that measures the non-diversifiable risk of the company relative to the risk of equities in general. The beta coefficient of a share is 1 if the share price in question moves one-for-one with the overall stock market, whilst a beta coefficient above 1 shows that the share in question "over-reacts" to movements in the overall stock

market. A beta coefficient less than 1 meanwhile shows that the share in question “under-reacts” to general stock market movements.

To give an example, it is generally believed that shares in food companies have low betas because people still eat food in a recession, whereas shares in a luxury good company will exceed 1 because their return falls more than proportionately in a recession and rises more than proportionately in a boom. For a business that is highly cyclical, this would lead to a beta coefficient higher than 1 which would justify a higher return on capital than might otherwise be expected by the difference between the *market return*⁴ and the risk-free interest rate. This difference is often referred to as the *equity risk premium* (ERP). The calculation of the ERP is itself hotly debated and there are many complications beyond the scope of this paper.⁵

In summary, CAP-M shows that the rate of return that is required to induce investors to finance a particular project is equal to the risk-free interest rate (approximated by the government bond rate) plus the ERP multiplied by the β of the project in question. In short, investments whose returns move perfectly together with the overall stock market have a β of 1, and a cost of equity capital equal to the risk-free interest rate and the ERP. Investments with a β above 1 are more volatile than the stock market and, therefore, require a higher expected return to induce investors to provide finance, whereas projects with a β of less than 1 are less volatile than the market and, therefore, require a somewhat lower return to induce investment.

⁴ We note that “market return” refers to the stock market as a whole and not to a market in the competition policy sense.

⁵ The arithmetic average of a and b is $(a + b)/2$. The geometric average of a and b is the square root of a times b .

6.5 The Return on Capital

Having discussed the appropriate cost measure for profitability analysis, we now need to turn to the next step in identifying whether a firm is charging excessive prices. However, the cost of (equity) capital cannot be readily compared with the price of the product that is being investigated as being excessively priced. In this section, we set out the concept of *return on capital employed* ("ROCE"), which can be compared to the cost of capital.

The approach of comparing cost-of-capital with ROCE in order to determine the appropriate price level is related to a long tradition of rate-of-return regulation for utilities. Regulators in the UK and the USA have for many years sought to measure the capital base of a regulated utility and then to estimate its weighted average cost of capital. The utility's price cap (i.e. the price the utility is allowed to charge customers) is then set so as to seek to generate for the firm an actual ROCE equal to its cost of capital.

There are, however, appreciable differences between excessive pricing in competition policy and rate-of-return regulation in a utility context. This is because in a utility context the initial investment was typically made in a protected market and/or as a state company, facing relatively little *ex ante* risk of failure. For example, many utility businesses were actually granted legal monopolies. In addition, the products they supply are often essentials for which demand is certain. By contrast, businesses in competitive marketplaces face significant *ex ante* risk of failure, and this needs to be rewarded *ex post* in the cases where the firm is successful.

The cost of capital estimated for a major stock market index (e.g. the UK FTSE 100) shows the required return for investors to induce them to hold these stocks. However, this return is calculated as a percentage of the stock market value of the company, not the assets invested in the company. The return on stock market value will always equal the cost of capital: if a company comprising £100 million of assets immediately achieved £20 million (i.e. 20%) per

annum profitability when the cost of capital is only 10%, its stock market value will rise from £100 million to £200 million so that the return on investment is back equal to £20 million/£200 million = 10%. Essentially, the stock market “capitalises” the excess return which is then reflected in the value of the company.

Given this automatic mechanism whereby efficient arbitrage ensures that return on stock market value equals the cost of capital, it is important to emphasise that the relevant measure for assessing excess profitability is the return on the asset base invested in the company, not the return on its current stock market value. For example, suppose that a change in local authority planning rules leads to restrictions on entry by new pubs, so that a given pub (which has a value of £5 million if it is not used as a pub) can make profits of £1 million per annum as a pub. Then, on the assumption of a cost of capital of 10%, and “capitalising” the profit of £1 million per annum, the revised valuation of the pub amounts to £10 million. Then, when assessing the return on capital generated by a profit of £1 million per annum on an asset worth £10 million, the return is simply the cost of capital of 10%. Yet, when compared to the £5 million valuation, the return on capital employed would be 20%.

The point of focussing on the original assets’ valuation is also important in the context of businesses that have recently changed hands. When an acquisition price exceeds the asset value of a company, the additional payment might reflect the value of a brand which has been built up over time as a result of significant spending on advertising, but it could also reflect rent from market power. If profitability analysis did not go back to the assets of a business, then it would effectively be possible to engage in “laundering” of excessive prices: a firm with excessive prices could simply sell its market power, and the acquirer could no longer be accused of making excess profits, since it had to “pay” for the capitalised value of the market power. Yet, customers would still be faced with excessive prices.

6.6 Ex Ante Risk and Survivorship Bias

When assessing the cost of capital, there are complex questions over *ex ante* risk and *ex post* “survivorship” bias. Suppose initial investments are made by venture capitalists, who know from experience that 50% of new investments go out of business.⁶ Then they would invest £100 million by investing £1 million in each of 100 different projects, in the expectation that 50 of these projects would go out of business and thus yield zero, and that 50 would generate a 20% return on capital. The total return would equal £10 million but this would arise from 50 projects yielding £200,000, not 100 projects yielding £100,000.

In this world, the 50 successful projects would be floated on the stock market and would yield 20% return on the invested asset and 10% on stock market value. According to the criteria discussed so far, each of these companies would be making an excess return. But it is easily seen that the set of companies floated on the stock market is a sample that is heavily biased towards companies that have been successful and that the failures never reach the stock market to feature in the sample.⁷

More generally, suppose that the mean of the distribution of returns is considered a “normal” return and there is a wide spread of possible returns around this level. If a competition authority then acts to curtail those returns in excess of “normal” or mean profit then:

⁶ In fact the success rate of new investments is even lower.

⁷ This argument can be seen by reference to assessing the profitability of a lottery ticket. A lottery ticket bought for £1 may have a return given by £1 million, but only with, say, a 1-in-2-million chance and otherwise it pays nothing. For the lottery-winner, the *ex post* realised rate of return is a million times the initial investment yielding a return that is, on any measure, clearly excessive. However, the expected *ex ante* return on this “investment” is negative: -50%. This is because on average every £100 invested in lottery tickets pays back only £50.

- the new distribution of realised returns, after regulatory intervention, is cut off at this level: no higher profit can be earned;
- since the competition authority is unlikely to act to compensate firms that have below average *ex post* returns, the mean of the post-intervention distribution will be lower than the original (pre-intervention) level; and
- since the pre-intervention level was the normal profit level, the expected return on investment is now less than normal profit and no-one will invest.

Accordingly, attempts to identify excess profitability are fraught with the difficulty that a high *ex post* return on capital has to be compared with the *ex ante* risk of the investment. In many high tech areas, it is known that the failure rate of investment is very high and accordingly that very high returns for successful businesses may be entirely reasonable when judged on the basis of an *ex ante* portfolio approach. Thus, in a business facing a 1-in-10 chance of success, *ex post* returns of 100% per annum on the 1-in-10 successful projects would in fact be a fair return on the project and the prices set by the successful firm should not be regarded as excessive.

It is, therefore, apparent that assessing *ex post* profitability for whether it is excessive requires information about the *ex ante* risks faced by the project. For example, mobile phone operators are, and have been, routinely subject to scrutiny by regulators (e.g. termination charge disputes in a number of EU countries, roaming charge investigation by the European Commission). However, at an earlier stage of the product life cycle, (potential) rivals to these firms – such as Ionica and Iridium – lost very substantial sums of money seeking to produce services that competed in the same wireless product space. This strongly suggests that *ex ante* the risks faced even by those who are now self-evidently successful were non-trivial.

The 1996 Director General's Review of BSkyB by the UK Office of Fair Trading provides an instructive case study. The review employed a novel (at least at the time) but intellectually important

analytic device. By way of history, the UK satellite broadcasting market, launched in the late 1980s and early 1990s, involved competition between two rival firms:

- British Satellite Broadcasting (BSB); and
- Sky Television (Sky).

The potential for this market was *ex ante* highly uncertain, and both firms made significant losses in their early years of operation. In 1990, the two firms merged to form BSkyB, which subsequently became a highly profitable company. In assessing the profitability of BSkyB, it was clear that it was relevant to take into account the *ex ante* risks and losses, and the approach adopted was to take into account the losses of the merged firms.

In this case, where the company under investigation consists of both firms in the provision of satellite broadcasting, the sum of their cumulative losses is clearly an intuitive measure of the capital invested by the companies in creating their market position. However, what would have been even more interesting is the question that would have arisen if one firm (say Sky) had survived and the rival (say BSB) had gone into liquidation, without it being able to merge with Sky. In that case, the surviving firm Sky would clearly include its own cumulative losses, but a case for including the BSB losses would remain. This is that, if in a market two firms compete for the market and only one firm survives, this suggests that each firm was faced with an *ex ante* risk of failure of 0.5. Accordingly, since the winner incurred an *ex ante* 50% risk of failure even if it was certain that the product in question (satellite television) would succeed, this should be reflected in the appropriate return. A very simple way to take this into account is to include the capital

investments of all investors in the market in the capital base of the winner.⁸

6.7 Intangible Assets

The analysis so far has assumed that the only capital employed in the business is the working capital invested. However, most businesses have a brand name that is a significant asset. Indeed, the set of intangible assets is even wider and includes know how, distribution arrangements, internal organisation and business architecture. These are assets that would have been built up over time, usually at a real resource cost, or by accepting interim profits below the cost of capital. Accordingly, the cost of building these intangibles is a legitimate factor in the capital base, indeed as legitimate as any investment in physical assets.

In principle one should go back to the origin of the company and examine all prior sub-market returns. By contrast, using an acquisition price risks capitalising market power.

6.8 Skill, Foresight and Industry

Consider a firm that has secured a market position where it is able to make widgets at £10 and sell them for £50, making an 80% margin, and also, let us suppose, making a very high ROCE. As such, it appears to satisfy the criteria for engaging in excessive pricing.

However, the view that such a firm should be accused of excessive pricing is not uncontroversial. It is a mantra of competition policy – and particularly of US antitrust policy – that it is not the purpose of competition policy to punish businesses who achieve their market position by means of “skill, foresight and industry”.

⁸ To the extent that there was *ex ante* risk of the product as a whole failing, this should be factored in, to gross up the capital base further.

That is, if a firm had the skill to create a new product that outperformed existing products in the market (whether or not it was able to benefit from IP protection), or the firm had the foresight to recognise the trends in a market and take action that in time gave it a powerful market position, or if the firm worked very hard to achieve low costs of production that gave it competitive advantage, this arguably provides a defence against excessive pricing.

The case for not prosecuting excess profits can also be supported by consideration of the dynamics of an economy. A firm making high profits is a beacon that inevitably attracts entry, and as such the market mechanism contains the basis of the correction of the excess profits. Equally, the prospect of high supernormal profits creates incentives for entrepreneurship and entry that is the guarantor of dynamically competitive markets.

Such an approach seems in its own terms reasonable enough. The merits of the free market system are in essence that entrepreneurs take risks to innovate, and the ones who make good judgments should be allowed to flourish (and those who make bad judgments to exit the market). A very high proportion of the cases where a firm is able to make high returns on capital may well be a consequence of skill, foresight or industry in some guise or other. If in addition we consider all those cases where firms have taken significant *ex ante* risks to build their position, and this risk should be factored into the cost of capital, the number of cases where there is excessive pricing that should be attacked may shrink quite dramatically. That said, many markets where firms have strong market positions are characterised by “artificial” barriers to entry and such cases may well be suitable targets for policy interventions such as the UK market investigation regime.

6.9 Practical Indicators of Excessive Pricing

In the previous sections, we have set out the economic approach to excessive pricing, and this has shown the conceptual difficulties that underpin a rigorous approach. The difficulties of establishing excessive pricing in terms of a coherent conceptual framework might be taken to imply that attempts to prosecute excessive pricing would be very rare, and even then generally unsuccessful. The practical response from regulators wishing to pursue such a case has been to rely on a series of proxies for excessive pricing.

In this section, we set out the sort of indicators that authorities have tended to use. However, at the outset we should also state that – in our view – these approaches are by and large unsatisfactory, and rarely meet the required evidential standard. There is sometimes a tendency to think that by using a large number of unsatisfactory measures, the fundamental deficiencies can be ignored. Our view is that this “don’t check the quality, feel the width” approach is not justified.

In our opinion, these proxies frequently only provide a one-way test. If merely a few or none of these indicators are satisfied then it is unlikely that the firm could be engaging in excessive pricing. However, we do not regard the fact that any of these tests are satisfied as necessarily proving the excessiveness of pricing. They are perhaps, at best, seen as a screen for whether a full analysis should be undertaken.

In very broad terms, four different indicators of excessive pricing have been proposed:

- Price-cost margins.
- Competitors’ prices.
- International price comparisons.
- Earlier prices of the dominant firm.

6.9.1 Price-Cost Margins

One of the ways in which a price might be found to be excessive is by comparison of the selling price with the cost of production. The price-cost margin for a good is defined as:

$$(price - cost)/price$$

Thus, if the price is £120 and cost is £100, the price-cost margin is $(£120 - £100)/£120$ which equals $£20/£120$ or 16.67%. Equally, if the price is £200 and cost is £100 the price-cost margin is $(£200 - £100)/£200$ which is 50%. The price-cost margin is, therefore, a simple measure of the “mark-up” that the firm is able to achieve over its cost of production.

Of course, as already discussed in Section 2.3 above, there are various different measures of cost. Of those, the two most relevant measures are:

- the *marginal cost* (MC) of production, this being the increase in total cost when output is increased by one unit; and
- the *average total cost* (ATC) of production, this being the total costs of production (including overheads) divided by total output.

ATC in turn is equal to *average variable cost* (AVC) (which equals marginal cost if marginal cost is constant at all output levels), plus *average fixed cost* of production.

Analysing the price-cost margin has a clear motivation in economic theory: it is a property of a market characterised by the textbook model of *perfect competition* that price equals marginal cost.⁹

⁹ It should be noted that price can equal marginal cost also under other theories or market structures. For example, price equals marginal cost in a Bertrand equilibrium of a one-shot game for a homogenous good where

Accordingly, in a perfectly competitive market, the price-cost margin should be equal to zero, computed on a MC basis. A positive price-cost margin on a MC basis indicates a market that is less competitive than a perfectly competitive market.

However, if a firm has constant marginal costs but also fixed costs of production, then pricing at marginal cost means that revenues will only cover the variable costs of production and the firm will make a loss equal to its fixed cost. Accordingly, marginal cost pricing would not be viable in a world with fixed costs.¹⁰ For that reason, a price-cost margin calculated on an ATC basis (i.e. a *net margin* instead of a *gross margin*) is often seen as more reliable. This is the margin above the average cost of production per unit, so if price is £10 and average total cost is £9, the firm is making a profit of £1 per unit, or 10%. That is, when the price-cost margin is calculated on an ATC basis, a positive price-cost margin is equivalent to positive profits. By contrast, if a firm had a price of £10 and marginal cost of £9, it would make a gross margin of £1 per unit, but if it had fixed costs of £1m per annum and only sold 900,000 units it would make a loss of £100,000 per annum. That is, a positive price-cost margin on a MC basis (i.e. a positive gross margin) does not necessarily imply positive profits.

Accordingly, given that the fixed costs of businesses typically differ by product or line of business, gross margins (i.e. price-cost margins on a MC basis) are not easily comparable across markets,

firms face no capacity constraints. In a perfectly contestable market, price can equal marginal cost even when a firm has 100% market share.

¹⁰ This is critically dependent on the assumption of constant marginal cost. If demand is variable and the marginal cost curve is steep, firms may make very high infra-marginal profits when demand is high, because although marginal cost is high and hence price is high, the production cost of all but the last unit of production is lower, allowing positive price cost margins that can contribute to fixed costs. However, these occasional high prices are themselves sometimes (inappropriately) challenged as excessive.

whereas net margins (i.e. price-cost margins on a ATC basis) relate to whether positive profits are being made.

However, even net margins are unsatisfactory in that although they correspond to whether profits are made, and total profit can be calculated by multiplying the gross margin by output, different businesses employ different amounts of capital. Accordingly, two businesses could make total profit of £1 million, but the first firm might employ £1 million of capital, giving a ROCE of 100%, while the second firm might employ capital of £10 million, giving a ROCE of 10%. That is, gross margins may show the level of profits, but they are not fully informative on the ultimately relevant question of ROCE.

Given this obvious limitation, it might be asked why price-cost margins are ever used when it is clear that analysis of ROCE will still be necessary. There are two main arguments. First, given that within a particular industry the capital intensity is typically relatively constant, comparison of price-cost margins within a market can provide insights into which firms have higher and which firms have lower than average ROCE – without saying anything about the level of the ROCE. Yet, this is still unsatisfactory. Given that profits earned from skill, foresight and industry are not normally seen as a legitimate target for excessive pricing investigations, above-average profitability cannot reasonably be an indicator of excessive pricing as this would be targeting efficiency. Second, some industries employ very little financial capital, and as such, profit divided by capital employed would give a high ROCE. For example, many service businesses employ labour and sell it out, but employ little capital. If the firm is able to invoice for its services rapidly, it may be able to operate with very little working capital as the received revenues “finance” the staff wages. Accordingly, ROCE is often regarded as a not very meaningful measure. However, this too is unsatisfactory. Such firms do possess significant intangible assets which would have required building, and if these are included in the capital base, the ROCE would be substantially lower. With valuation difficulties for such intangibles calculating the “true” ROCE is difficult. Even so, in

our view such difficulties are not a basis for using a different, unreliable measure.

6.9.2 Competitors' Prices

Comparison of the prices charged by the firm under investigation with those of its competitors that supply the same product was used by the European Commission in *General Motors* and *United Brands* and by the UK OFT in *Napp*. One problem with this approach is that if the firms used as a benchmark are genuinely competitors, and the products they supply are genuinely comparable in quality, it is then puzzling why consumers do not substitute away from the allegedly overpriced product. One would, therefore, expect that prices would equalise across the market (possibly at an excessive level), so that the comparison between the firm under investigation and its competitors would not be very informative.

6.9.3 International Price Comparisons

Different industries have different levels of fixed costs, so they will require different levels of price-cost (gross) margins to achieve breakeven profit. Also, different industries have different levels of capital intensity, and accordingly a given price-cost margin will correspond to a different ROCE in different industries. However, the level of fixed costs and capital intensity, though differing widely across industries, might be expected to be equal in the same industry. This might hold true even across different countries, to the extent that input costs do not vary dramatically.¹¹

¹¹ In very labour-intensive industries, an international price comparison may not make much sense, given that price differences might well be explained by different wage levels, and not be market power.

It would then be possible to compare prices in a given industry across countries, and the average price across countries could be taken as a proxy to the price in an averagely competitive market. At that point, if the prices in one country were (for example) 20% higher than the average, this might indicate a failure of competition in that country.

Price differences between Member States were the main basis of the excessive pricing allegation in *United Brands*.¹² This decision was quashed on the grounds that the costs of the dominant firm had not been carefully examined. However, in the cases against the French collecting society SACEM, the ECJ held that where there are very substantial price differences between Member States, this in itself could be evidence of excessive prices, unless the dominant firm could point to objective relevant differences between Member States which explained the disparities. On the facts, SACEM's royalties in France were many times higher than those charged by collecting societies in other European countries.

However, international price comparisons raise a series of complex questions which must be taken into account:

- First, to compute comparisons it is necessary to construct appropriate price index numbers. Complex issues arise when the bundle of goods consumed by customers in the two countries to be compared differ: there is then a choice of whether to use an index based on consumption patterns in the home country or the foreign country, and indeed whether even then comparisons are legitimate if there are differences in consumer tastes between countries.
- Second, to compare prices in different countries, it is necessary to convert prices at the appropriate exchange rate.¹³

¹² Case IV/26699 *Chiquita* OJ [1976].

¹³ This complication has become somewhat less relevant within the EEA, where many countries now use the Euro.

However, the spot exchange rate at any moment in time is typically driven by macroeconomic policies and is thus not always a good guide to long run “fundamental” exchange rates; as economists often argue that exchange rates are overvalued or undervalued, the basis of comparisons is open to question. At the very least, there are arguments that prices should be compared over a longer run period, rather than at a snapshot in time.

- International price comparisons are also very often complicated by differences in tax regimes. As it would be inappropriate to blame a company for its country’s high tax rates, pre-tax prices are generally preferred; however, this exercise then involves an analysis of whether firms would absorb some of the tax, or whether the tax would simply be passed on fully to customers.

For these and other reasons, international price comparisons are a controversial measure of establishing whether prices in any one country are excessive.¹⁴

¹⁴ A related technique suggested by the case law is some form of “yardstick competition” in which prices in markets lacking competition are compared with otherwise similar markets in which there are a number of competing providers. This was suggested by the ECJ in *Bodson*. In some French towns funeral services were provided by a single firm granted a concession, while in others there was competition between rival providers. The ECJ suggested comparing the pattern of prices between the two types of town. This inter-town price comparison is analytically similar to international price comparisons, but without some of the difficulties such as exchange rates and different tax regimes. Another form of benchmarking used by the European Commission in *United Brands* was to compare the price of branded and unbranded bananas. The price of unbranded consumer goods can be seen as an upper bound for the cost of production of branded goods. However, this is somewhat unsatisfactory as it ignores all the difficulties in valuing the intangible brand.

6.9.4 Earlier Prices of the Dominant Firm

Comparison of the alleged excessive prices with the dominant firm's earlier prices is sometimes used as a test. In *General Motors*, the car manufacturer had imposed a sharp *increase* in the price of type certificates.¹⁵ However, this assumes that the prior price was not below the competitive level,¹⁶ and also requires us (as admittedly we anyway would) to form a view about what increment above the competitive level counts as excessive. In reality, the application of this test implies that competition law is directed less at excessive price levels but at price increases.

6.10 What Premium Is Excessive?

Finally, the question over the appropriate threshold for regarding a price premium as excessive is an issue on which economics cannot give much guidance. Instead, the "allowed premium" is a policy choice, to which economics can contribute little.

We note that previous cases provide a range of indicative thresholds, often in contradiction with each other.

In *United Brands*,¹⁷ the Commission held that the prices of the dominant seller of bananas on the relevant geographic market were at least 15% too high.¹⁸ However, it reached this view on the basis of

¹⁵ In *Napp*, the argument was used that the price of the drug in question had *not fallen* since coming out of patent, and that since one could expect prices charged under patent to be at the monopoly level, this demonstrated that prices were excessive.

¹⁶ The ECJ found in *United Brands* (paragraph 243) that the price quoted by the Commission, for bananas delivered in Ireland, produced a loss.

¹⁷ Case IV/26699 *Chiquita* OJ [1976]

¹⁸ At the *Napp* appeal, the OFT drew attention to this 15% figure, and said that it could conservatively be assumed that Napp's prices were "at least 15% higher than they would be under competitive conditions". The OFT

a finding that the prices charged to (most) customers in Germany, Denmark, the Netherlands and the BLEU were substantially higher, by up to 100%, than the prices charged to customers in Ireland. In addition, there was a 20% to 40% difference in price between the price of Chiquita and unbranded bananas.

By contrast, in the context of monopoly enquiries under the UK Fair Trading Act 1973, a price differential of 7% to 9% between compact discs sold the UK and the USA was considered acceptable in *The Supply of Recorded Music*,¹⁹ while in *New Cars*²⁰ a long-run differential of 3.5% to 7.1% between the UK and comparable Member States was not.

However, even more fundamental than these inconsistent thresholds in previous cases is the fact that the “real” measure of profitability should be ROCE (adjusted for appropriate risk), not the price-cost margin.

6.11 Conclusions

Policy interventions in the field of excessive pricing have used a variety of ad hoc measures, and inconsistent standards. Our view is that a necessary condition for a price to be excessive is that, for the product in question, the firm has enjoyed a persistently high return on capital, and where this fully takes into account survivorship bias and the capital base genuinely reflects the cost of intangible assets. Even then, measures to improve competition and entry may still be more appropriate.

argued that the Advocate-General had accepted the 15% threshold when the *United Brands* decision was appealed. However, the ECJ itself in the *United Brands* case, while confirming the general principle that excessive pricing could be an abuse, quashed that part of the Commission’s decision which argued that *United Brands*’ banana prices were in fact excessive.

¹⁹ Cm 2596 (1994).

²⁰ Cm 4660 (2000).

Other books in the same series

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.

2000: Fighting Cartels – Why and How?

The book takes up legal as well as economic aspects on why we should be concerned with cartels, how to detect and find sufficient evidence of cartel behaviour, and how to accomplish an effective prevention of cartel behaviour.

The theme reflects the growing concern in Sweden as well as internationally for the detrimental effects of cartels on society. The book takes up various aspects of anti-cartel enforcement, and in particular, how competition authorities of today could be successful in the prevention of cartels.

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