Dissertation

by

Ashley Wentworth Roughton
B.Sc (Eng)(Hons)(Lond), Ph.D (Cantab), Dipl. Law (PCL), B.L. (N.I.).

as

A submission to the School of Social Sciences (Department of Economics)

at

City University

for

the partial fulfilment

of

The Master of Science Degree

in

Economic Regulation and Competition

Unilateral effects and collective dominance in the United Kingdom and European Union laws of Mergers

October 2003

-ooOOoo-

Content

This dissertation will concentrate upon the status of coordinated and unilateral effects in the law of mergers in relation to the activities of the United Kingdom and European Union competition authorities. By European Union it is proposed that the activities of the Commission of the European Communities (DG Comp) and appeals therefrom be considered only.

Abstract

Merger policy as understood by the Commission of the European Communities and the Office of Fair Trading in the United Kingdom have many points of comparison. However it is wrong to think of them as being entirely complimentary. Current issues include a consideration of modification of merger policy in the European Union and the implementation of merger policy in the United kingdom. Specifically, considerable difficulty exists in understanding the differences between the concept of a substantial lessening of competition test for mergers as used in the United Kingdom and the current test used by the Commission of the European Communities based, as it is, on dominance. It has been suggested in some of the literature that these two tests are the same whereas in other parts of the literature the tests are asserted to be different. This had led to the identification of what is described as a gap between economic concerns and current tests based upon dominance. The views are, on occasion, very polarised. However in order to make the assertion of similarity, particularly where unilateral effects are concerned, a considerable amount of stretching either of language or of economic principles is necessarily involved. In any event, valuable incentives to firms to compete more competitively may be lost unless a clearer test, such as substantial lessening of competition, is used.

References

In this text references to papers are by the label given at the end of the reference in the list of references at the end of this text. For instance the citation: Huck, S.A., Konrad, K.A. and Müller, W. "Big fish eat small fish: on merger in Stackelberg markets" *Economics Letters* **73**(2), pp 213-217; Huck *et al* (2001) will be referred to a Huck *et al* (2001). References to a page number or paragraph number will be written Huck *et al* (2001: p2) or Huck *et al* (2001: ¶4) respectively.

Citations to legal cases are the same *mutatis mundatis*.

Web sites

No warranty or assurance is given that the web sites cited herein are or will be safe, active or are secure or may be lawfully accessed. All of the cited web sites were accessed at least once during the month preceding the submission of this dissertation in the author's genuine belief that such sites were safe and lawful to access.

Creation

This dissertation was written using the WordPerfect word processor, version 9 operating under Microsoft Windows XP in a 14 point times new roman font with double line spacing. This dissertation, excluding pages i-viii and the tables of references and cases, is 14,366 words in length.

Originality Statement

Save where is otherwise stated, is set out below or as is clear from the context, this dissertation is original. I am generally indebted to Dr Peter Lukacs for a series economics lectures relating to mergers given by him during the first year of this course (2001/2002) and Mr David Parker for a lecture relating to mergers and competition policy given by him during the end of the second year of this course (2003) as well as Viscusi *et al* (2000), chapter 5 and Tirole (1998), chapter 5.

I am personally grateful to the following: Professor Jim Bergeron for supervising me in this dissertation, for his friendship and general bonhomie, to the past course director Dr Xeni Dassiou for her general help, encouragement and advice during a very interesting 2 years, David Parker of Frontier Economics for his real, fascinating and enthusiastic assistance on a number of technical questions relating to economics and my part-time student colleagues on the course who helped me to make sense of, or make me think that I had made sense of, regulatory economics! Any mistakes and errors remain my own.

To: Florence and Cosima

"Children are the living messages we send to a time we will not see."

– John W. Whitehead,
Founder, President and Chairman of the Board of
the Rutherford Institute and
onetime counsel for Paula Jones.

The author asserts his rights generally in accordance with chapter IV of part I of the Copyright, Designs and Patents Act 1988.

Ashley Wentworth Roughton
Autumn 2003.

Abbreviations

Abbreviation	Meaning
1973 Act	The Fair Trading Act 1973.
1998 Act	The Competition Act 1998.
2002 Act	The Enterprise Act 2002.
article x	article x of the Treaty.
	The Competition Commission.
CFI	The Court of First Instance of the European Communities.
Chapter x	Chapter x of part I of the 2002 Act.
the Commission	The Commission of the European Communities.
the Community	The European Community.
DG Comp	Directorate General for Competition at the Commission.
DoJ	Antitrust division of the Department of Justice in the US.
ECJ	The Court of Justice of the European Communities.
EU	The European Union.
FTC	The Federal Trade Commission of the US.
HHI	Herfindhal-Hirschman Index.
MD	Market Dominance.
OFT	Office of Fair Trading.
regulation x	article x of the regulation.
the regulation	Council Regulation (EEC) № 4064/89 of the 21st of December 1989 on the control of concentrations between undertakings[1]
SLC	Substantial Lessening of Competition.
the Treaty	the Treaty Establishing the European Community.

[1]Published in the Official Journal of the European Communities, series L, volume 395 of the 30th of December 1989, pages 1-12. Corrected version published in the Official Journal of the European Communities, series L, volume 257 of the 21st of September 1990 page 13. Amendments introduced by Council Regulation (EC) № 1310/97 of the 30th of June 1997 as published in the Official Journal of the European Communities, series L, volume 180,of the 9th of July 1997, page 1, corrigendum from the Official Journal of the European Communities, series L, volume 40 of the 13th of February 1998, page 17.

UK	The United Kingdom.
US	The United States of America.

Table of Contents

Page №

Title Page . . . . -i-

Content and Abstract . . . . -ii-

References, Web Sites and Creation . . . . -iii-

Originality statement, dedication and assertion of moral rights. . . . . -iv-

Abbreviations . . . . -v- & -vi-

Table of Contents . . . . -vii- & -viii-

Chapter

1. Introduction . . . . -1-

2. Domestic and Euro Dominance - the position under article 82 and Chapter II. . . . . -6-

3. Appraisal - the European Context. . . . . -10-

4. Appraisal - the Domestic position. . . . . -13-
   Substantive Examination. . . . . -14-
   Public Interest. . . . . -15-

5. The position so far and why worry about the difference? . . . . -16-

6. Models and means of Competition . . . . -22-
   Pure Bertrand Competition. . . . . -22-
   Differentiated Bertrand Competition. . . . . -23-
   Cournot Competition . . . . -25-
   Unilateral Effects. . . . . -26-

7. Collective Dominance. . . . . -27-
   Gencor . . . . -29-
   Airtours . . . . -31-
   Joint Ventures . . . . -35-

8. Is there a difference? . . . . -36-

9. How does it work? . . . . -43-
Applying the SLC test in *Airtours*. . . . . -46-

10. Conclusions and Closure. . . . . -48-

Appendix A - Differentiated Bertrand Competition . . . . -51-
Appendix B - Cournot Competition . . . . -55-

References . . . . -57-
Table of Cases . . . . -59-

Unilateral effects and collective dominance in the United Kingdom and European Union laws of Mergers

1 Introduction.

1.1 Firms[2] in allied areas of business often merge to form a single entity. There are a variety of reasons why firms might wish to do this including the strengthening of market share (and the ability to dominate that market), the lessening of transaction costs, the acquisition of complementary businesses and the acquisition of key personnel who could not be gotten by other means. In this dissertation the term merger means any form of concentration such as acquisition, takeover or assignment of the ownership of assets.

1.2 Mergers may be horizontal in character where, for instance, one retail chain purchases another. Mergers may also be vertical in character where, for instance, a retail chain purchases a wholesale (upstream) firm. Mergers may, finally, be conglomerate where unrelated firms combine because there is a degree of complementarity, such as banks and insurance companies; though that is not to say that conglomerate mergers of distinct uncomplimentary businesses cannot happen. Although rare(ish) conglomerate mergers may also entail other less desirable elements such as portfolio effects (one stop shopping) and leverage effects (another variant of one stop shopping),

[2]Throughout this dissertation the expression "firm" is used in the sense that it would be understood by an economist, being any entity (individual or corporate) capable of economic activity and this should be understood as being the same thing as an undertaking as is often referred to in European legislation.

though that is not to say the portfolio effects only arise in cases of conglomerate mergers. Pure conglomerate mergers are regarded (by some economists at least) as raising no significant competition issues, though they are often scrutinised by the competition authorities because there may be horizontal or vertical characteristics to the merger in question[3]. Further conglomerate mergers can be massive (*GE/Honeywell* was estimated to be worth something in the region of $40Bn) and indeed Biro and Parker (2002) have pointed to areas where conglomerate mergers might be of a concern.

1.3 So far as vertical mergers are concerned, these (generally) raise no competition issues. Rather it is suggested that where vertical mergers are proposed they are the subject of scrutiny because there is a horizontal element[4]. It is horizontal mergers, or mergers with horizontal aspects which

---

[3]*GE/Honeywell* is a spectacular example of where a huge proposed conglomerate merger has been investigated by two different competition authorities with results which were poles apart. The differences in approach were (it is said) due to the attitude of the Commission to vertical mergers which would lead to strengthening or leveraging of the merged entity's market power down the vertical chain whereas the DoJ's approach was orientated towards the risk of rivals being denied trade by the upstream component. The approaches, though fundamentally different and although leading to differing conclusions and results, were nothing to do with fundamental differences in the application of the MD test as opposed to the SLC test. Indeed if it is accepted that the MD test tends to let mergers through which would be blocked by the SLC test, then the conclusion should have been the other way around with the DoJ blocking and the Commission clearing.

[4]In 1981 the assistant Attorney-General, William Baxter, in charge of the antitrust division of the Department of Justice in the United States of America and draughtsman of the 1982 DoJ Merger Guidelines (still used today, though revised from time to time) said in evidence to a congressional committee that:

"In my view there is no such thing as a vertical 'problem' ... The only possible adverse competitive consequences of vertical arrangements inhere in their horizontal effects. Only where vertical arrangements facilitate restricted output and raised prices – horizontal impacts – should they be inhibited."

(See Howard (1983: pp150-151)).

tend to raise the greatest concerns.

1.4 The economic analysis of a merger is by no means all in favour of mergers and certainly does not accept as welfare enhancing the many reasons which are given in favour of a given proposed merger. Such reasons tend to be internal to the merging firms rather than providing a socially acceptable outcome. The pure economic theory of mergers (see for instance Hay and Morris (1991; ch 14.3, p510)) assumes that managers are efficient, that they act in the shareholders' interests and that stock markets are efficient at valuing firms. However these assumptions are often wrong. Managers can be slack and can act out of self interest rather than in the shareholders' interests. Stock markets are often notoriously inefficient especially when it comes to valuation. Indeed motives such as management incentives and stock market inefficiency can influence decisions about mergers as much as, if not more than, efficiency gains or socially acceptable outcomes. That said, those motives of themselves are not of a competition concern. It is not for competition authorities to nanny managers, stock markets or shareholders.

1.5 Huck *et al* (2001) suggest that mergers do not achieve much from a consumer perspective and from a shareholder perspective the market value of the merged firm may fall. They go on to say, however, that if certain conditions are satisfied then mergers can be welfare enhancing. On the other hand there are respectable arguments which suggest that mergers are a good

thing, at least for the entities concerned because there are fixed and operating cost synergies.

1.6 Further the pure economic theory of mergers tends to suggest that mergers are a good thing because inter-firm transactional costs can be (but are not always) saved and thus prices may fall. However analysis seems to suggest that where a Cournot or differentiated Bertrand model exists then prices will or may rise[5]. However if prices fall then efficiencies may increase, in the short term at least, which may be attractive to market speculators.

1.7 Why is there a problem? Simply because the more players there are on a market the greater the scope for competition and competitive factors to influence the market mechanism. Fewer players mean less competition and therefore less scope for competitive factors to influence the market mechanism. That is one theory at least and is the principal one which underpins arguments put forward buy many (but not all) analysts. There are other theories such as the competition as rivalry school. This dissertation will concentrate on the "few is bad" school as it is the focus of much contemporary comment especially in the context of the issues raised in this dissertation.

[5]This analysis will be carried out in the body of this dissertation as it is central to the current questions relating to merger analysis.

1.8 The main area for examination by the competition authorities is market power. The competition authorities tend to be driven by the desire to encourage competition or, perhaps, to enhance welfare in some other way. Clearly the desire is to stop mergers which are bad for competition and allow through the rest, since, as has been said, it is not for the competition authorities to say whether an otherwise competitive merger is advisable as a business matter. However the difficulty is what test? Do we say that where a 'few' entities remain then competition will be distorted (in which case what constitutes a few, is it 4 to 3 or 5 to 4?) or do we say that it is a situation where a large player comes into being which has power and will therefore inevitably dominate and control the market notwithstanding that there are 'many'[6] players on the market? This is the essence of the difficulty and the attempts to deal with it legally which this dissertation seeks to explore and outline. First, though, it is necessary to look in some detail at the structure of current competition laws relating to mergers in the domestic and European context and secondly to look at the economic principles concerned.

1.9 Following on from this chapter, which is introductory, chapter 2 then explores the legal background from a European and domestic perspective. Chapters 3 and 4 then appraise the legal position relating to mergers from both the European and domestic perspectives. By domestic is meant the United Kingdom and by European is meant the regime characterised by the

[6]Being more than a 'few'.

regulation. Chapter 5 then explores the differences between the European and domestic perspectives. Chapter 6 (in conjunction with appendices A and B) explores models of competition concentrating on unilateral effects (differentiated Bertrand and Cournot). Chapter 7 covers coordinated effects and explores the *Gencor* and *Airtours* cases in some detail. Chapter 8 then asks whether there is any real difference between the MD and SLC tests. Chapter 8 concludes in the affirmative, that there is a difference and, indeed, there are good reasons for not stretching the MD test (as the Commission suggests, though it might be resiling from that position) to deal with economic concerns raised by unilateral effects as incentives to compete will be attenuated. Chapter 9 then explores ways in which the SLC test has been implemented in the UK, draws from practices in the US and attempts to analyse the most recent important ECJ decision, *Airtours* from an SLC perspective. Chapter 10 makes a few closing comments and draws some conclusions.

2 Domestic and Euro Dominance - the position under article 82 and Chapter II.

2.1 The prohibition against an abuse of a dominant position is now, for the purposes of this text at least, the same under Community and UK law though with obvious territorial differences so far as effect is concerned. The basic rationale of article 82/Chapter II is well known - abusive dominance is not

allowed. However the question must be asked: given that the mischief in issue is the abuse of a dominant position as opposed to the mere holding of a dominant position what business do the competition authorities have in deciding whether to authorise a merger? A firm may be 100% dominant on the relevant market and yet may not be abusive. Neither article 82 nor Chapter II prohibits dominance *per se*.

2.2 In the case of *Continental Can*, the ECJ resolved this or at least attempted to do so by saying (at ¶¶26 and 27) that:-

> "[26] Abuse may ... occur if an undertaking in a dominant position strengthens [its] ... position in such a way that the degree of dominance reached substantially fetters competition *i.e.* that only undertakings remain in the market whose behaviour depends on the dominant one.
>
> "[27] Such being the meaning and the scope of Article 86 ... the strengthening of the position of an undertaking may be an abuse and prohibited under Article ... [82] ..., regardless of the means and procedure by which it is achieved, if it has the effects mentioned above."

Hence the rationale of the ECJ (at least) is that the question to ask is whether the merged entity is so dominant that its presence on the market is abusive, *i.e.* that competition will be distorted. The more dominant a firm the more likely that the very fact of its dominance will connote abuse. This was, however, arguably widened in later years by the ECJ in *Hoffmann-La Roche* at ¶91, where it apparently went further:-

> "[91] The concept of abuse is an objective concept relating to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition in products or services on the basis of the

> transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition."

but this is a very similar test to that set out in *Continental Can*. Likewise in *Michelin*, the ECJ said at ¶57:-

> "[57] A finding that an undertaking has a dominant position is not in itself a recrimination but simply means that, irrespective of the reasons for which it has such a dominant position, the undertaking concerned has a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market."

This would tend to imply that there is a special responsibility not to engage in undistorted competition when one is in a position of dominance. So the gist of the judgment is that it is O.K. to be dominant but you mustn't be naughty however dominance *per se* is tolerable. *Michelin* seems to affirm the argument that dominance is not the problem but abuse is. However it has to be accepted that, in the absence of choice or substitutes (as one would expect in a case of major dominance), competition is likely to be distorted. Therefore, as the ECJ has suggested in all of the cases cited above apart from *Michilin*, the very existence of dominance is (or strongly tends to be) abusive; though this then leads one to ask why, in that case, is a specific finding of abuse required if it automatically follows from the existence of a dominant position? To this it can be said that the law is tautologous and it is true, if the ECJ jurisprudence on the question is to be accepted, that no specific finding of abuse is necessary.

2.3 At this point, however, policy diverges. The Commission chose to adopt a regulation purportedly to fill the gap arising after *Continental Can* so far as mergers were concerned. It is unclear where the source of such power to adopt a regulation in such terms comes from. There is no article of the Treaty which says "though shalt not be dominant" or that "though shalt not make yourself dominant"[7]. The recitals to the regulation itself suggest that such powers derive from the right of the Council to adopt additional powers to attain the objectives of the Community (article 308[8]) such as those as set out in article 3(*g*), but that does not mean that the analysis of mergers ought to or have to be carried out by reference to a dominance based test. Whether the constitutional basis of the proposed regulation is fragile has probably become lost in the mists of time, however sight must not be lost of the fact that it is precisely this sort of fudging of the edges of the treaty which gives legislators a bad name. As it is hoped that this dissertation will demonstrate, the Commission emerges with a fuliginous character at best.

2.4 The proposed regulation to regulate mergers became law on the 21st of September 1990[9] and has undergone some changes since then. The

[7]As might be the case under the Sherman Act in the US.

[8]There is no case, where article 235 of the Treaty has been invoked, which has said that the Commission was incorrect to relay upon that provision of the Treaty save on procedural grounds.

[9]In the form of the regulation.

Commission also issued an implementing regulation[10] which deals with procedural aspects such as time limits and hearing procedure. It should be added that as at the time of writing a proposed re-write of the regulation is being promulgated by the Commission[11].

2.5 Under the domestic regime the rule, simply stated, was that the merger should not act against the public interest. It was only on the 20th of June 2003 that the basis for analysis changed. The differences between the European and domestic basis of analysis of proposed mergers is the focus of this dissertation.

3 Appraisal - the European Context.

3.1 Once a proposed merger (or proposed concentration to use EU parlance) is within regulation 3 and the financial requirements of regulation 1 are met then the Commission can consider whether the proposed concentration falls for consideration by it (described as having a community dimension). It is accepted that in some cases the merger in question may have been implemented without any notification, though this does not affect the ability

[10]Commission Regulation (EC) № 447/98 of the 1st of March 1998 on the notifications, time limits and hearings provided for in Council Regulation (EEC) № 4064/89 on the control of concentrations between undertakings, as published in the Official Journal of the European Communities, series L, volume 61 of the 2nd of March 1998, pages 1-28.

[11]See: http://europa.eu.int/eur-lex/en/com/reg/en_register_0840.html.

of the OFT or the Commission to investigate. The failure to notify can carry some hefty consequences including reversal of the concentration[12] and the imposition of fines[13].

3.2 The overriding test is whether the merger is "compatible with the common market" (see regulation 2(1)). However these words rarely fall for interpretation. Rather the regulation states that where consideration is being given to common market compatibility the following shall be taken into account (regulation 2(1)(*a*) and (*b*)):-

> "(*a*) the need to maintain and develop effective competition within the common market in view of, among other things, the structure of all the markets concerned and the actual or potential competition from undertakings located either within or outwith the Community;
>
> "(*b*) the market position of the undertakings concerned and their economic and financial power, the alternatives available to suppliers and users, their access to supplies or markets, any legal or other barriers to entry, supply and demand trends for the relevant goods and services, the interests of the intermediate and ultimate consumers, and the development of technical and economic progress provided that it is to consumers' advantage and does not form an obstacle to competition."

Thus in assessing community compatibility it is necessary to take account of the desire to maintain competitive structures and to take account of how much the market would be altered by a merger. The actual test as to whether a merger ought to be cleared or blocked is to be found in regulation 2(2) and (3), which read:-

---

[12]Regulations 7(1) and 8(4).

[13]Regulation 14(1)(*a*), 14(2)(*b*) and 14(2)(*c*) for single lump sum fines and regulation 15(2)(*b*) so far as periodic penalty payments are concerned.

> "2. A concentration which does not create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it shall be declared compatible with the common market.
>
> "3. A concentration which creates or strengthens a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it shall be declared incompatible with the common market."

3.3 Thus the test in the regulation is compatible with article 82, though it is hard to see where in the Treaty there is power to pre-empt a potential breach of article 82. Henceforth this test will be known (as it is known by the various commentators on the subject) as the MD test.

3.4 So far as the MD test is concerned there is no concept of abuse, though it has to be accepted that in case of complete dominance or near complete dominance the legal theory appears to be that the "special responsibility" of the dominant undertaking is so onerous that it cannot but act abusively so this objection may be nugatory in some cases at least.

3.5 The Commission in carrying out its investigation (during what is called a phase II assessment, which arises only if serious doubts are raised on initial investigation - phase I, which is a sifting procedure, which takes place in a month to six weeks following proper notification) will ask first whether the merger will create or strengthen a dominant position and if so, secondly, whether competition will be significantly impeded.

3.6 Many commentators have suggested that the notion of abuse and the second limb of the test which has to be adopted by the Commission are the same - that a change in language does not imply a change of effect, that abuse is an almost certain consequence of dominance and its mention in article 82 is mere surplusage.

3.7 The essential features of the phase II test is the consideration of market shares (which is an indicator of, but only an indicator of, market power) and collective dominance.

4 Appraisal - the Domestic position.

4.1 At present the merger regime process in the United Kingdom is to be found in part III of the 2002 Act which came into force on the 20th of June 2003 via the operation of the Enterprise Act 2002 (Commencement № 3, Transitional and Transitory Provisions and Savings) Order 2003 (S.I. 2003 № 1397) and section 279 of the 2002 Act.

4.2 The scheme of the 2002 Act is to remove politics from the issue of competition management - whether it does so is a matter for debate outside the scope of this dissertation. Under the 2002 Act, the OFT now has the duty to refer a merger (or anticipated merger - see section 33 of the 2002 Act) to the CC if it is a relevant merger (£70m share of supply, not market share,

and/or 25% market presence - as for the 1973 Act) and the merger will result or may be expected to result in a substantial lessening of competition. Under the 2002 Act the test for whether a merger is created is if the merging entities cease to be distinct or become under the same common control (within wide limits). However no reference shall be made to the CC if customers are likely to benefit (whether by lower prices or greater innovation) from the merger. The OFT/CC dual rôle is similar in many (but not all) respects to the phase I and II procedures under the regulation.

Substantive Examination.

4.3 The CC, once a reference is made, is obliged to investigate the merger to ascertain whether it will result in a substantial lessening of competition (bearing in mind possible customer benefits, see section 35(5) of the 2002 Act). The precise legal test is set out as follows:-

> "35.–(1) ... the [Competition] Commission shall ... decide the following questions-
>
> (*a*) whether a relevant merger situation has been created; and
>
> (*b*) if so, whether the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within any market or markets in the United Kingdom for goods or services.
>
> "(2) For the purposes of this Part there is an anti-competitive outcome if-
>
> (*a*) a relevant merger situation has been created and the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within any market or markets in the United Kingdom for goods or services; or
>
> (*b*) arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation and the creation of that situation may be expected to result in a substantial lessening of

> competition within any market or markets in the United Kingdom for goods or services."

4.4 It is unclear what criteria exist in applying the SLC test as there is, at the time of writing, no or little jurisprudence in this jurisdiction on the issue. However once the CC has determined the reference (and come to the conclusion that there is an anti-competitive outcome) then it has to consider what action to take.

Public Interest.

4.5 The 2002 Act has also retained, to a certain extent, the old public interest rules. In those circumstances the Secretary of State[14] has power to refer mergers (which have not otherwise been referred), which may be against the public interest, to the OFT. Under section 44 of the 2002 Act the OFT is then obliged to report to the Secretary of State on whether a public interest situation exists. In assessing this the OFT must have regard to section 44(4) of the 2002 Act, which states:-

> "(4) The [OFT in its] report [to the Secretary of State] shall, in particular, include decisions as to whether the OFT believes that it is, or may be, the case that-
>
> > (*a*) a relevant merger situation has been created or arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation;
> >
> > (*b*) the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within any market or markets in the United Kingdom for goods or services;

[14]The Secretary of State would usually be the Minister for Trade and Industry.

> (*c*) the market or markets concerned would not be of sufficient importance to justify the making of a reference to the Commission under section 22 or 33;
>
> (*d*) in the case of arrangements which are in progress or in contemplation, the arrangements are not sufficiently far advanced, or not sufficiently likely to proceed, to justify the making of such a reference;
>
> (*e*) any relevant customer benefits in relation to the creation of the relevant merger situation concerned outweigh the substantial lessening of competition and any adverse effects of the substantial lessening of competition; or
>
> (*f*) it would be appropriate to deal with the matter (disregarding any public interest considerations mentioned in the intervention notice concerned) by way of undertakings under paragraph 3 of Schedule 7."

This represents a series of tests which are, in essence, much like the SLC test. However the OFT is also obliged to report upon the public interest which the Secretary of State has notified the OFT is of concern. Thereafter the OFT, in its report to the Secretary of State, is obliged to make remedial suggestions.

4.6 Further the Secretary of State retains residual powers under the 2002 Act to refer situations which do not fall full square within the 2002 Act but are nevertheless of special concern.

5 <u>The position so far and why worry about the difference?</u>

5.1 Thus far the tests under the MD and SLC regimes have been set out and, to a certain extent, explained. The European position is well entrenched and has been in operation for about 12 years and arguably but perhaps not convincingly draws on nearly 40 years of jurisprudence relating to article 82.

This, perhaps, is one reason why there have been expressions of reluctance about abandoning it. Biro and Parker (2001: p161), however, paint a more rosy picture:-

> "The [MD test] ... was adopted in order to harness the experience gained under Art[icle] 82 of the ... Treaty, ... and the jurisprudence of the [ECJ] ..., and so create <u>immediate</u> legal certainty over the scope of the new EC merger regime. ..." (*emphasis added*)

And go on (at page 164):-

> "One of the main initial advantages of the dominance test was its ability to draw upon the established language of Art[icle] 82 ... and the body of experience set down by ECJ case-law. However, as the use of the [regulation] ... has matured, this link may be less important today and could constitute a disadvantage."

5.2 The Domestic position is totally untested in this jurisdiction <u>but</u> (and importantly) is very similar to the test for examining mergers in the US.

5.3 The most obvious and mundane difference between the MD and SLC tests is that the acronyms are different. Some commentators and practitioners say (as shall be seen), in terms at least, that such is the only difference. However Böge and Müller (2002), principal officers at the Bundeskartellamt in the Federal Republic of Germany suggest the following as highlighting the difference between MD and SLC:-

> "Two out of four or two out of three companies in a relevant market merge. After the merger competition in the market is less intense than before, without any tacit co-ordination of conduct taking place between the remaining market participants. Indisputably, such a merger could be *assessed* both under the SLC and the MD tests. However in the critic's view it is questionable whether such a merger could be *prohibited* on the basis of the MD criterion."

5.4 This seems to be a rather obvious and strange way of defining the problem. The suggestion seems to be that if player reducing actions take place then it is obvious that they ought to be stopped and it *may* be the case that the MD test will not fulfil that. This is unsatisfactory and, to put it boldly, wrong in economic terms. Although all of the oligopoly theories currently recognised, such as the Cournot and Bertrand theories of competition imply, in part at least and subject to some extensions in the Bertrand case, that prices will inevitably rise if fewer players end up on the market it is not right to say that any merger policy should be orientated at ensuring that as many players stay on the market as possible (or at least their numbers are not reduced by mergers). In reality, of course, the real issues start to become apparent and important when the number of players are few in number.

5.5 In the discussion paper published by the Bundeskartellamt following a competition conference in the Federal Republic of Germany in 2001 (Bundeskartellamt (2001)) it was said (in summary):-

> "The vast majority of those participating in the discussion endorsed the theses substantiated in the working paper that the two criteria "market dominance" and "SLC" do not contain any significant differences in their substantial content and that problematic mergers can be assessed with both tests in a rigorous, flexible and effective manner. Ultimately both concepts dealt with the same factual issues (*e.g.* market definition) and problems (*e.g.* prognostic risk). In the view of most participants even the evidence of the lack of internal competition in oligopolistic situations does not constitute any specific problem in respective of the market dominance test."

There would be no real need to investigate whether there was any difference between the SLC and MD tests if they were equal in their result. Biro and

Parker (2002) however cast some doubt on this, concluding that:-

> "In our view, the SLC test has the potential to cover certain issues that are presently difficult to deal with under the dominance test."

Thus there is clearly a tension between Bundeskartellamt (2001) and what Biro and Parker say.

5.6 Biro and Parker also argue that, so far as concerned unilateral effects (from a Cournot and differentiated Bertrand perspective)[15] and coordinated effects dominance *per se* is not really the issue or, is not the only issue. Dominant firms may have market share but that does not automatically imply market power - this argument is crucial and key but, lamentably, appears, on occasion at least, to be underestimated. Hence the MD test might operate to block mergers which were not economically detrimental in competition terms or *vice versa*. Conversely Biro and Parker also argued that non-dominant firms might exercise market power in an oligopolistic context if the Cournot model applies. They conclude that the SLC test properly applied will deal with the concerns which are raised by the MD test. Lowe (2002) also remarks that "The [MD test] ... and SLC [test] ...have produced broadly convergent outcomes, especially in the EU and the US in recent years." but suggests an amendment to the MD test by making it clear that merger

[15]The expression "unilateral effects" is used here to describe situations where the differentiated Bertrand or Cournot models apply.

analysis applies to non-collusive unilateral effects. The question which this statement leaves behind is obvious[16] but Lowe provides no evidence for the convergence assertion at all and indeed it is hard to see how he can be right without such evidence. Convergent outcomes may arise for a number of reasons, such as lack of jurisdiction, failure to reach financial thresholds, complete failure of concentration, the offer of commitments, differences in the implementation of policy, political influence and so on. In reality there will only be a few cases - really big mergers - where there are relatively few participants that the differences will out. Also, and very importantly, in order (at the present time) to see if differences will out the merger has to be international in flavour since it will have to be scrutinised by the DoJ and the Commission so that the different tests will be applied. It is also to be remembered that the position as between the OFT and the Commission is different since they will operate exclusively of each other at least so far as the OFT is subservient to the Commission by reason of the operation of regulation 21(2)[17]. Where the Commission ought to be subservient to the OFT (because the merger is purely national) then regulation 9(3) does not afford the same courtesy and the Commission still has the right to investigate, in the case of distinct markets - even if purely national and even if the merger is purely national in effect. Unfortunately (for the purposes of

[16]If the axiom "If it ain't broke and don't fix it" is right then why is a change being proposed?

[17]Which gives the Commission exclusivity in relation to mergers to which the regulation applies.

this dissertation at least) due to the infancy of part III the 2002 Act and also due to the fact that the Commission is most unlikely to engage in parallel merger investigations with the OFT or the CC (due to limitation of resources) it is highly improbable that a direct comparison could be made between the OFT/CC's application of section 22(1)(*b*) of the 2002 Act and the Commission's application of regulation 2(2) & (3).

5.7 It must be pointed out that it is the potentially devastating damage that these mergers can do to economies which makes a consideration of and comparison between the SLC and MD tests important, even though the difference <u>may</u> (and the word 'may' is stressed) be unimportant for a large number of mergers.

5.8 As well as the Bertrand/Cournot issues (*i.e.* which model best describes the position in question) it is also worth mentioning that though a post merger situation may be prone to unilateral effects it could (equally) be prone to coordinated effects. Since these are important it is worth spending some time looking at them. More importantly it has been said that the MD test suffers when confronted with the notion of collective dominance[18] and that it has been stretched to its limit in this regard. It is not clear whether this is a valid criticism.

---

[18] Which will be explored later on.

6 Models and means of Competition.

Pure Bertrand Competition.

6.1 This is competition on prices for homogenous products. Consequently the consumer will purchase the cheapest version of the product in question (assuming no switching costs). Where all firms charge the same price then Bertrand theory assumes an equal number of consumers for each producer (though not a crucial assumption). Thus even though, post merger, producers may decease in number and even though each firm may have an increased number of customers nevertheless, even in an oligopoly situation, according to Bertrand theory prices will fall to marginal cost (where he posits that all that is needed is two firms for perfect competition to ensure - see Bertrand (1883)). This is so because a firm may experience large increases in demand by marginally undercutting rivals - which happens until the price equates with marginal cost. That price is an equilibrium price often termed the Bertrand equilibrium or Nash equilibrium.

6.2 Thus a paradox is introduced. If the number of firms decreases, nevertheless this makes no difference to prices. This seems illogical. After all fewer firms may act either in concert or independently to behave strategically so as to manipulate market prices to make profits. Also no account is taken of search and switch costs. The Bertrand model is too perfect and it relies on perfect

information, rational behaviour and product homogeneity. The perfection of the underlying assumptions (infinite capacity, switching behaviour and product homogeneity) do not reflect reality. Edgeworth (1897) suggested that the capacity issue was one of importance. Tirole (1998: p 211, ¶5.2.1.) uses an interesting example to illustrate the point:-

> "... imagine the case of two hotels in a small town. In the short run, these hotels cannot adjust the number of beds (capacity). It is useless for them to get involved in cut-throat price competition if they are incapable of satisfying market demand individually. In the longer run they do not increase their capacity very much, because they expect keen competition in a situation of over capacity."

Hence though Bertrand competition is a starting point it is only that.

Differentiated Bertrand Competition.

6.3 The assumption of product homogeneity is one which can be relaxed in the Bertrand context. Imagine instead that products are heterogeneous with a degree of substitutability. By this expression (degree of substitutability) it is intended to mean that consumers regard the products as being close substitutes so that consumers chose directly between the two since if consumers do not make such a choice then there is no overlap and the merger will have no anti-competitive effect. In such a situation switching behaviour is more pronounced and consumers are elastic in their behaviour, though in practice it is necessary to establish this by examining the industry concerned. The credit card industry is an example of an industry where switching costs

are important (see Cabral (2000:p 205, ch 12) where he explains this). This situation is referred to as differentiated Bertrand competition. In a merger situation characterised by this model the prediction is that prices will rise. This, of course, makes sense but is really no more than an acknowledgement that the further products are from each other (either or both in terms of their inherent or apparent differences and/or their geographical location) the less substitutable they are with each other. That such substitutability is impeded by the existence of artificial barriers (such as product differentiation brought about as a result of advertising) is nothing to the point - if there is an impediment to substitution, even if small, then that is all that matters. Appendix A sets out a mathematical analysis of this situation, the end result being that if there are differences between products then prices will rise and in the Nash equilibrium sense are proportional to the specific switch cost (which, in this context, is the cost of making a purchase of an imperfect substitute).

6.4 Another way of looking at it is to compare the situation with the perfect Bertrand model, where a Nash equilibrium prevails at price equating with marginal cost. Where there is differentiation then the incentive to lower prices is attenuated because the price lowering firm will not capture all its rival's customers since some of them will remain loyal to their existing firm.

Cournot Competition.

6.5 There is a certain air of unreality so far as perfect Bertrand Competition is concerned. In real life there are such things as capacity constraints (in the short run at least) and product differentiation. Product differentiation has been dealt with already, however in the Cournot case if one firm increases its prices then consumer defection is attenuated by the fact that other producers may not be able to increase their capacity to cope[19] and barriers to entry may mean that capacity is capped. Accordingly a producer may make capacity decisions about how much of a product to produce but with the caveat that a firm's output response in reaction to the output decisions of others is limited. This means that competition can be weak which implies higher prices. Where a merger takes place then the supply capacity tends to decrease, hence prices rise, though this is not a universal rule. As has been said mergers may generate cost savings. In such circumstances the value of the non-merging entities will decrease. However if output decreases then the non-merging firms benefit by being able to fill the output gap, especially of capacity constraints are not completely limited. The value of a merger to a non-merging firm increases or decreases depending upon the costs saving of the merged entity (see Cabral (2000): p 280, ch 15).

Unilateral Effects.

---

[19] An important assumption here is that there are barriers to entry or expansion, in the short run at least.

6.6 So far the Bertrand/Cournot models have been discussed. The market effects arising as a result of the merger in question can be unilateral in effect and arise in the manner predicted by the models. A merger may increase market power, which allows a firm to raise prices by restricting output - clearly, as has been said, if output can be increased then a raising of prices will be pointless.

6.7 It should also be added that because mergers raise prices[20] then rival non-merging firms will usually applaud mergers. This is a unilateral effect even if there is also tacit collusion (provided that the conditions are met - *Airtours*: ¶62, reproduced below), though this is not universally the case. If the merged entity is able to take advantage of cost reductions then this may lead to a lowering of prices and thus a dampening of the applause - each merger is different.

Coordinated Effects.

6.8 Where firms collude then prices can be raised or other decisions which are detrimental to the consumer can be made as a result of that collusion. This is not a concern which is exclusive to mergers. Cartels can operate in non merger situations but cartels are easier to organise; the fewer members there

[20]As Cabral (2000:p 279, ch 15) says:-

> "Mergers normally imply an increase in prices and a reduction in costs."

are to organise. Of course fashion following or tacit collusion is also a coordinated effects problem but due to its legal prominence in recent years this question is covered in greater detail in the following chapter.

7 Collective Dominance.

7.1 So far two notions have been brought into play. The notion of differentiated Bertrand competition as increasing the distance between yourself and your rivals and Cournot competition as keeping capacity below socially optimal levels. In addition there are collective effects.

7.2 What is the position where there are followings in a particular market? Say for instance a number of firms follow each other in conduct (whether by tacit collusion or otherwise) or consumers are bound to a particular producer for particular reasons. It may be that there are links between firms which mean that, effectively, they can be treated as one entity even though they are legally distinct. The attitude of the Commission and the Courts has been that the absence of legal links (such as joint share ownership and so on) is in no way decisive[21] but rather one needs to look with more precision and detail at the links between the applicant entities and the others. For instance if a horizontal merger raises no competition concerns *per se* but nevertheless one

[21] See *Italian Flat Glass*, ¶358 where this freedom of thought was expressed for the first time.

of the applicant entities has some upstream market power then the fact of that upstream market power and its ability to influence to behaviour of the non-merging downstream firms will be given some account. The difficulty has been how it is that one defines this in a way that provides, at least, a degree of certainty to lawyers (if not economists).

7.3 Similarly if the behaviour of firms is transparent and there is an effective means of signalling or measures of common influence then this may form the basis for a tacit collusion regime. Nash (1951) suggests that there is at least one equilibrium in any finite game, though possibly in mixed strategies. This implies that no player can do any better by adopting other strategies since the outcome will be worse and, since the outcome is positive, the outcome will be orientated to profit maximisation, *i.e.* it is rational to follow the fan club rather than buck the trend.

7.4 In recent times two important cases have emerged from the CFI being *Gencor* and *Airtours*. Both of these cases need to be examined in some detail since much turns upon informational advantages, degrees of common influence and signalling behaviour which the firms on the market had and were able to exercise. It should be added that although it is all very nice to examine mergers from a game theory perspective it is the practical understanding of how information is used, how common influence is exercised and how signals can be promulgated which is of basic importance.

Gencor.

7.5 Gencor and Lonrho wished to merge. Both had significant interests in the platinum market. If the merger had been allowed to go ahead then two firms (the merged entity and a third party) would have a significant dominant position (between 60-80% of the relevant market). The finding of collective dominance was said by the court to be justified if there were economic links between the merged concern and the third parties, thus there was a degree of common control. This notion started in *EMC* where the Court said that:-

> "[221] In the case of an alleged collective dominant position, the Commission is therefore obliged to assess, using a prospective analysis of the reference market, whether the concentration which has been referred to it leads to a situation in which effective competition in the relevant market is significantly impeded by the undertakings involved in the concentration and one or more other undertakings which together, in particular because of correlative factors which exist between them, are able to adopt a common policy on the market and act to a considerable extent independently of their competitors, their customers, and also of consumers."

7.6 Bellamy and Child (2001: p414) have suggested that the expression "... because of correlative factors which exist between them ..." should be understood as referring to anything which may connect the merged entity and the third party or third parties. It is submitted that this could be achieved by means of information sharing, signalling or other connecting factors.

7.7 In *Gencor* the CFI (dismissing the appeal) said:-

> “[276] Furthermore, there is no reason whatsoever in legal or economic terms to exclude from the notion of economic links the relationship of interdependence existing between the parties to a tight oligopoly within which, in a market with the appropriate characteristics, in particular in terms of market concentration, transparency and product homogeneity, those parties are in a position to anticipate one another's behaviour and are therefore strongly encouraged to align their conduct in the market, in particular in such a way as to maximise their joint profits by restricting production with a view to increasing prices. In such a context, each trader is aware that highly competitive action on its part designed to increase its market share (for example a price cut) would provoke identical action by the others, so that it would derive no benefit from its initiative. All the traders would thus be affected by the reduction in price levels.”

This statement is no more than a practical working of what Nash (1950) said, that there may be no point in bucking the trend because the outcome will be worse. Obviously if the players are at an informational disadvantage with respect to each other or there is a lack of requisite control then this may make a difference but in such a situation it is hard to see how, then, there could be any collective dominance.

Airtours.

7.8 However the mere lessening of numbers of market players is not conclusive. In *Airtours/First Choice*, the Commission concluded (blocking the merger) that the considerable transparency in that market meant that player following amongst dominant firms led to collective dominance in the short-haul package holiday market in the United Kingdom and Ireland. This result was surprising, not least because notwithstanding the question of transparency there was no other link between the merged entity and the other dominant players on the market. The merged entity (if merged) would have about 30%

of the market share which was about the same as the other dominant player on the market - the rest of the market players, being numerous in number, took up the rest of the relevant market share. The Commission said that the only finding it had to make was whether it was rational for oligopolistic players act in a way which reduced competition between them - and more besides which, again, introduces the game theory perspective. This is recited at ¶54 of the decision, which reads:-

> "(54) Furthermore, contrary to the apparent view of Airtours ... it is not a necessary condition of collective dominance for the oligopolists always to behave as if there were one or more explicit agreements (*e.g.* to fix prices or capacity, or share the market) between them. It is sufficient that the merger makes it rational for the oligopolists, in adapting themselves to market conditions, to act, individually, in ways which will substantially reduce competition between them, and as a result of which they may act, to an appreciable extent, independently of competitors, customers and consumers." (*emphasis added*)

The decision of the Commission was appealed but, sadly, the CFI did not comment upon this specific paragraph or on the rationale underlying it. Before the appeal was heard and determined Whish (2000) did say:-

> "This language [of paragraph 54] seems to suggest a departure by the Commission from the precedents. The adoption of a common policy, the test applied in earlier cases, does not appear to be the same as the rational, *individual* application of policy, the test suggested in paragraph 54. To put the point another way, the Commission seems here to have lowered the threshold for a finding of collective dominance, by looking at the rational unilateral behaviour of individual entities rather then their tacit coordination. It is not entirely clear whether the commission deliberately intended in this paragraph to extend the notion of collective dominance; this is a matter which will be dealt with in the appeal to the CFI." (*emphasis as in text*)

7.9 It could be that this is Professor Whish's diplomatic way of saying that ¶54 was a fig leaf for the poor analysis of the Commission. Indeed there is plenty

in the *Airtours* judgment which points to sloppy analysis[22], though that is not to say that ¶54 is sloppy. However Professor Whish does not escape with a clean set of wings either. It is clear from ¶54 that the Commission was saying that the test was whether it was rational for individual players to act in a particular way. If it was then the players would act in that way. That must be right in that it is wrong to differentiate between 'rational unilateral behaviour' on the one hand and 'tacit coordination' on the other <u>in the right circumstances</u>. The Commission meant that where they are the same thing then though the behaviour can be described as individual its result is effectively tacit collusion because all of the individual actions are orientated to achieving a common goal, the Nash equilibrium. Perhaps the language of the Commission was bad in that the Commission could have added that the circumstances had to be right[23] but given that there is only one Nash equilibrium it is clearly the case that the players, acting individually, will move towards it. Given there is almost always likely to be a Nash equilibrium if there are correct informational advantages, common means of influence and signalling behaviour then the players will always achieve that equilibrium, hence rational unilateral behaviour and tacit collusion are the same thing in those circumstances.

[22]Page 350; ¶130 is the author's particular favourite.

[23]And it was what those circumstances were where the Commission was held and found to have fallen in to error by the CFI.

7.10 On the appeal the CFI allowed the appeal. In *Airtours* the CFI adopted a tough approach to the view of the Commission by saying, first, that if there is no substantial alteration *ex post* to competition as it stood *ex ante* then the merger must be allowed. Secondly, and after a brief review of the case law, the CFI said:-

> "[62]As the applicant has argued and as the Commission has accepted in its pleadings, three conditions are necessary for a finding of collective dominance as defined:
>
> > - first, each member of the dominant oligopoly must have the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common policy. As the Commission specifically acknowledges, it is not enough for each member of the dominant oligopoly to be aware that interdependent market conduct is profitable for all of them but each member must also have a means of knowing whether the other operators are adopting the same strategy and whether they are maintaining it. There must, therefore, be sufficient market transparency for all members of the dominant oligopoly to be aware, sufficiently precisely and quickly, of the way in which the other members' market conduct is evolving;
> >
> > - secondly, the situation of tacit coordination must be sustainable over time, that is to say, there must be an incentive not to depart from the common policy on the market. As the Commission observes, it is only if all the members of the dominant oligopoly maintain the parallel conduct that all can benefit. The notion of retaliation in respect of conduct deviating from the common policy is thus inherent in this condition. In this instance, the parties concur that, for a situation of collective dominance to be viable, there must be adequate deterrents to ensure that there is a long-term incentive in not departing from the common policy, which means that each member of the dominant oligopoly must be aware that highly competitive action on its part designed to increase its market share would provoke identical action by the others, so that it would derive no benefit from its initiative (see, to that effect, *Gencor* v. *Commission*, paragraph 276);
> >
> > - thirdly, to prove the existence of a collective dominant position to the requisite legal standard, the Commission must also establish that the foreseeable reaction of current and future competitors, as well as of consumers, would not jeopardise the results expected from the common policy."

7.11 Thus it appears that the Commission's stance at the phase II stage (rational to act to reduce competition between players) was subsequently accepted by the Commission to be too wide. It is submitted that the Commission should not have made this concession and it is suggested that it is possible that the

Commission may have done so for tactical reasons. The CFI found that the Commission made errors of assessment when it, the Commission, concluded that it was rational to act to reduce competition between players because (specifically) market transparency was high[24]. This was evidenced (strongly it is submitted) by the fact that there were no real links between customers of Airtours Plc and those of the remaining players in the market who exercised market power. This is essentially a matter of fact and not law or economic principle. Indeed, being bold, the economic principle enunciated by the Commission is, it is submitted, correct.

7.12 *Airtours* is as much about what it does not say as it is about what it does say and the reader is referred to ¶8.4 below for further exploration into this case.

Joint Ventures.

7.13 It should be added that Joint ventures require special consideration. A full consideration of joint ventures in outside the scope of this dissertation. However this aspect of merger control cannot be left without making a few comments upon joint ventures. In some cases firms, rather than merging, will both become share holders or stakeholders in a joint entity, jointly controlled. Fully functional joint ventures are now to be considered as

[24]No holding was made by the CFI that the basic statement made by the Commission at ¶54 was wrong.

mergers for the purposes of the regulation. However where the parent firms are independent and only co-operate in the form of the joint venture then such will be considered in the context of an article 81 enquiry. Article 3(2) of the regulation states:-

> "The creation of a joint venture performing on a lasting basis all the functions of an autonomous economic entity, shall constitute a concentration within the meaning of paragraph 1 (*b*)."

This is known as a full function joint venture and is defined by the Commission in its notice on the concept of full-function joint ventures under the regulation on the control of concentrations between undertakings[25] as being:-

> "... a joint venture [that] ... operate[es] on a market, performing the functions normally carried out by undertakings operating on the same market. In order to do so the joint venture must have a management dedicated to its day-to-day operations and access to sufficient resources including finance, staff, and assets (tangible and intangible) in order to conduct on a lasting basis its business activities within the area provided for in the joint-venture agreement."

7.14 Joint Ventures may fall for consideration under article 81 or they may fall for consideration under the regulation. Joint ventures may exist for a variety of reasons, such as a research cooperation, sales agency or for the purposes of being a fully fledged (or full function) separate (but not independent) firm. The regulation is only concerned with full function joint ventures as is set out in article 3(2).

---

[25]Published in the Official Journal of the European Communities, series C, issue 66 of the 2nd of March 1998.

8 Is there a difference?

8.1 As the mathematical analysis in appendices A and B show, mergers raise prices or can do so because the number of players decrease or because of product differentiation. The trick is to stop those mergers which raise prices or cause other economic concerns and not those which do not. Merely saying that a particular merger creates or strengthens a dominant position does not perform this function neatly. Further no account is taken of the fact that it is the preservation of competition rather than the deprecation of dominance which is essential.

8.2 First and foremost it is important to say that each market is different. In some cases the Cournot model may apply, in other cases the differentiated Bertrand model may apply and in others the position may be hard to determine. Co-ordinated behaviour may also be inevitable. As Biro and Parker (2002) suggest:-

> "None of these [Bertrand, differentiated Bertrand or Cournot] models of oligopolistic competition is necessarily either correct or incorrect. Each model will be more or less appropriate in different market circumstances. For example if a particular industry is characterised by capacity constraints, and no firm is able to supply a large share of the market, then it may be most appropriate to analyse competition in a Cournot context. However, it may also be the case that the products in question are differentiated, in which case the insights from the differentiated Bertrand model may be relevant. It is rare for a single economic model to capture all the salient features of a market."

And crucially, they follow by saying that:-

> "These models imply that there is no robust relationship between market structure and market power. The general presumption that a decrease in the number of firms increases prices does not always hold. Simple measure of market concentration, such as market share or the number of firms are insufficient to provide an unambiguous guide as to the effects of a merger. "

Which seems to be the most damning indictment of the MD test, especially when looked at in the context of what is meant in a European context by dominance - the ability to behave "independently of competitors, customers and ultimately consumers." (see *United Brands*). Unilateral effects issues are not completely dealt with by the use of a dominance test.

8.3 The best way to illustrate this is by way of an example - imagine a Cournot market where there are a number of large firms. If there is a merger then the number of firms decreases and so each firm's market power increases. So by the operation of equation (B4) the price/cost margin increases, or prices rise. However this price rise may not be due to the abuse of a dominant position or even due to the creation or strengthening of a dominant position since, artificially, concerns about dominance do not come into play until about 40% of the relevant market is dominated by a single firm. This 40% (rebuttable) presumption, that firms are not presumed dominant unless they have at least 30%-40% market share harks from case law and decisional practices relating to investigations and proceedings under article 82. Hence the merger may be missed by the investigating authority when applying the MD test, yet there is a significant danger that prices would rise. The 40% point is nothing to the

point and will do nothing to enervate unilateral effects concerns. Further even if the 40% threshold is ignored (which is arbitrary but does provide some certainty) scenarios can be found where on no view are the pre-merger entities in a dominant position and no dominant position exists post merger, yet consumer detriment is experienced. True enough, these effects are experienced at the sharp end (where there are transitions from 4 to 3 or 5 to 4) but there is nothing magical in these numbers - each market must be looked at on the basis of the facts which govern and determine its operation. Vickers (2002: p2) puts the position in its proper perspective:-

> "'Dominance' clearly captures the situation of several firms acting as one – by coordinating their behaviour – as well as the situation of single firm dominance. But does it capture all important instances of 'unilateral effects', where firms continue to act independently, without co-ordination, but substantially less competitively? The jargon here is unfortunate inasmuch as 'unilateral' effects can well have multilateral, marketwide consequences – *e.g.* for the prices charged not just by the parties to the merger, but by other firms too." (*emphasis as in original text*)

8.4 Here Vickers gets to the core of the debate, that the MD test (in his view) only captures dominance or dominance related concerns. It does not deal with the all important unilateral effects concerns. However Vickers does accept that the debate may not be all closed since he accepts that there are some who believe[26] that in *Airtours* the CFI may have stated that so far as the MD test was concerned it might still be open to the CFI to say that unilateral effects concerns were part of the MD analysis under the regulation or, say some, that the CFI did not limit itself. To do this the CFI or the ECJ would

[26]He was careful to exclude himself from this class!

have to stretch the meaning of the regulation to breaking point, specifically the meaning of the word dominant. However, as Vickers accepts, words mean what the Courts say they mean[27] and so it is theoretically possible, if highly unattractive, for the European courts to extend the meaning of dominance to cover unilateral effects. Vickers concludes this part of the debate by saying:-

> "In sum, it cannot safely be assumed that the existing [MD] .. test covers all anti-competitive mergers of concern. The test needs to change."

and then goes on to say that if such word stretching were to be carried out then it would have unfortunate effects in relation to firms which acquired market power by hard work and by fair and lawful means (*i.e.* by acting competitively). This, in turn, would make a nonsense of incentives to compete, a situation which Vickers describes as 'rather odd'.

8.5 In reality it is clear that the MD test may not yet have been completely defined. This is not because the words of the regulation are hard to understand in their literal sense but rather that the rules relating to the construction of regulations are not yet settled. The European courts seem to adopt a much more relaxed teleological approach to construction which,

---

[27]Citing from Lewis Carroll's, "Through the Looking Glass", 1872:

"'When *I* use a word,' Humpty Dumpty said, in rather a scornful tone, 'it means just what I choose it to mean – neither more nor less.'

'The question is,' said Alice, 'whether you *can* make words mean so many different things.'

'The question is,' said Humpty Dumpty, 'which is to be master – that's all.'"

although providing uncertainty does provide flexibility in an ever changing legal environment and in a (European) world[28] where economic needs and scenarios vary constantly and with ever increasing speed. This would tend to suggest, as an observation and not a criticism, that it is economics which drives the law and not *vice versa*.

8.6 Is there any evidence for the suggestion that the CFI has left the door open to extending or stretching the meaning of the word "dominant" as appears in regulation 2(3)? A cursory reading of the case would suggest not. The question is whether, by not saying anything about unilateral effects, the CFI meant that such effects could not form the basis for consideration in the context of the regulation. The answer might be that the CFI's silence arises from the fact that it was being asked to deal with the case before it and not to provide policy guidelines.

8.7 Given the current policy of the Courts of the Community not to be bound by earlier judgments in a *stare decisis* sense, because the laws of the Community are still developing, this answer is understandable[29]. However, against, this is the fact that there was ¶54 of the Commission decision (see ¶7.8 above). It was there for the CFI to see and indeed Airtours Plc criticised it in written submissions. However the Commission rejoined by saying that

[28]With apologies for the category mistake.

[29]Indeed Nickpay and Houwen (2003) support this view.

its decision did not rely upon ¶54 but that this was a coordinated effects decision; but if this is so then why write it? That many believed the Commission in fact was extending the notion of collective dominance to unilateral effects seems beyond doubt - see Motta (200:p 2076). The CFI for its part did not take up the cudgel since it held that it could only review that way that the law had been applied to the facts (which the CFI described as elliptical and indeed is not legally correct). To this, two weighty statements must be added. First in part of a round-table discussion the (then) head of the merger task force, Götz Drauz who was responsible for the *Airtours* decision (Drauz (2002)) said:-

> "Our first impression is that the judgment [of the CFI in *Airtours*] should not be read as intending to limit the scope of the dominance concept in the context of the ... [r]egulation. What the CFI has done, and I think this is very much welcomed despite the sometimes very critical language used by the CFI, is to clearly establish (*sic*) the criteria which must be fulfilled in order to reach a finding that a particular transaction is likely to result in the creation or strengthening of dominance in the form of tacit collusion. In doing so, the CFI has made it clear that a high standard of proof must be met before we can reach such a conclusion. What I think it has not done, however, is to say that this is as far as Article 2 of the Merger Control Regulation can be stretched in terms of dominance scenarios involving multiple firms. The case before the CFI as we understood it and as the parties understood it was a case of tacit collusion. It was not a unilateral effects case. So my first point is that we do not interpret that judgment as limiting the scope of the unilateral effects theory because that was not the question before the CFI. It was a case of tacit collusion."

Which, in the light of ¶54 of the decision seems a little disingenuous. At any rate his boss Mario Monti, the EU Commissioner for competition policy, said (Monti (2002)):-

> "Based on our experience to date, however, these potential drawbacks to retention of the dominance test should not be over emphasised. What matters even more than the precise wording of the test itself is, in my view, the way in which it is applied. The [MD] ... and SLC standards have produced broadly convergent outcomes, especially in

> the EU and US in recent years[30], and the dominance test is proving to be an instrument capable of being adapted to a wide variety of situations. In particular, it is worth noting that the test has been successfully used to assess the dynamic impact of mergers, and has not confined the Commission to making static market analyses. Indeed, I believe that the dominance test, if properly interpreted, is capable of dealing with the full range of anti-competitive scenarios which mergers may engender. Not changing it has the additional advantage of preserving the jurisprudence that the Courts have developed all these years in interpreting its meaning and, therefore, in maintaining a high degree of legal certainty." (*emphasis added*).

8.8 Further in *CMBT* (an article 82 case) the ECJ said:-

> "[45] The existence of a collective dominant position may therefore flow from the nature and terms of an agreement, from the way in which it is implemented and, consequently, from the links or factors which give rise to a connection between undertakings which result from it. Nevertheless, the existence of an agreement or of other links in law is not indispensable to a finding of a collective dominant position; such a finding may be based on other connecting factors and would depend on an economic assessment and, in particular, on an assessment of the structure of the market in question."

Which led Haupt (2002: p438) to comment:-

> "The [ECJ] ... thereby confirmed that, in a specific case, structural factors of the market can also be sufficient to serve as a basis for the finding of collective market power provided they allow the undertakings to act like a collective entity in the external relationship *vis-à-vis* competitors, trading partners and consumers. However there has so far been no case in the context of Article 82 in which the Commission or the European courts would have considered the connecting element required for a collective dominant position as existing solely in oligopolistic market interaction."

8.9 The preceding two paragraphs illustrate, it is submitted, precisely the stretching of language, envisaged by Vickers (2002).

8.10 Further though the unilateral effects of a merger may be described as unilateral because they do not involve actual or tacit collusion it may be that they are not, in reality, unilateral effects at all. In both the differentiated

[30] An assertion which has been tested in this dissertation and has been found to be, as yet, unsupported by evidence, so far, at least, as unilateral effects are concerned.

Bertrand and Cournot models the price rising effects can be attributed to (1) the size of the transport or switching costs (for example) in the differentiated Bertrand case or (2) the market share in the Cournot case. In both cases the position of the other players in the market form part of the governing equations which predict price rises. In the case of differentiated Bertrand competition this can be seen from equation (A4) and in the case of the Cournot model this can be seen from equation (B4). This may, in turn, provide the link suggested in *CMBT*.

9 How does it work?

9.1 The MD test and its workings in the shape of *CMBT*, *Gencor* and *Airtours* has been discussed at length and various issues concerning construction have been raised as well as economic issues relating to the application and scope of the MD test. The MD test is a mature test in many respects. However no discussion about comparisons between the MD test on the one hand and the SLC test on the other would be complete without an examination of the manner in which the SLC test is operated in practice.

9.2 The SLC test is operated in a variety of jurisdictions including New Zealand, Canada, the US and the UK. Because the UK standard has only been in force for some few months, there is a paucity of jurisprudential and decisional material available. Indeed the first reference by the OFT to the CC was made

on the 14th of August 2003. However in guidance issued by the OFT in relation to 2002 Act merger notifications, the OFT has said that it will undertake the following steps[31]:-

- Define the relevant product and geographic markets affected by the merger.

- Examine the nature and extent of pre and post merger competition in the identified relevant markets.

- Ask whether this indicates concerns about a possible loss of rivalry as a result of the merger, particularly where the parties may be each other's closest competitors.

- Where there is a possible competition concern then is there a possibility of contestability such as to deter anti-competitive effects.

This may be compared to the guidance issued by the DoJ which asks whether and to what extent[32]:-

- the merger would significantly increase concentration and result in a concentrated market, properly defined and measured.

- the merger, in light of market concentration and other factors that characterize the market, raises concern about potential adverse competitive effects.

- entry would be timely, likely, and sufficient either to deter or to counteract the competitive effects of concern.

- any efficiency gains that reasonably cannot be achieved by the parties through other means.

[31]Paraphrased from "Mergers - Substantive Assessment Guidance" issued by the OFT, to be found on the OFT web site http://www.oft.gov.uk.

[32]Paraphrased from "Horizontal Merger Guidelines" issued by the DoJ, to be found on the DoJ antitrust web site http://www.usdoj.gov/atr/public/guidelines/hmg.htm.

- but for the merger, either party to the transaction would be likely to fail, causing its assets to exit the market.

As can be seen there is a degree of similarity of approach except that the DoJ is charged to enquire what producer benefits are present. This approach, with respect, seems rather introspective.

9.3 The case in which the most recent and far reaching analysis of mergers in the US was in *Staples*. The FTC sought to take interim judicial measures to restrain a proposed merger between two stationary superstores. There were two issues being: (1) the definition of the relevant market (stationary superstores against large utility or general grocery stores which sold or also sold stationary) and (2) whether post merger prices would rise (which party engaged more convincing econometrics experts).

9.4 *Staples* was the first major case in the US where unilateral effects were highlighted as being a merger concern. However the government's evidence was simply accepted by the judge as showing that there would be price rises if the number of players were reduced by reason of the merger and that entry into the relevant market wold be difficult (thus meaning that the market was not contestable). To that extent *Staples* was an unremarkable case.

Applying the SLC test in *Airtours*.

9.5 One question worth posing (even if it cannot be answered within the confines of a Master's dissertation) is what might have happened if the SLC test were applied to the merger which arose in *Airtours*? Given that the main (but not only) market activity of concern/interest in *Airtours* was the purchase of air seats[33] - clearly a market limited by capacity; the situation in *Airtours* can be likened to a Cournot type market (in the air seat purchasing market in any event). The next question is whether the reduction of numbers would produce a substantial lessening of competition. Clearly the market requires investigation and examination but the finding of the CFI that the market shares of the existing players were volatile (page 348; ¶120), suggested that the market was <u>and would be</u> competitive. This finding seems crucial to the issue of whether, if the merger had gone ahead there would have been a substantial lessening of competition.

9.6 In *Airtours* the relevant product and geographic markets were found by the Commission (and upheld by the CFI) to be short-haul foreign package holidays originating in the United Kingdom and Eire.

9.7 Further although the combined market share was found by the Commission (as upheld by the CFI) to be likely to rise from 70% to 83-85% and the HHI would be likely to rise from 1700 to 2150 the Commission also found that

[33] That is seats on charter flights - not the physical seats.

(and accepted) that the relevant market was competitive prior to merger[34]. Further the CFI found that the Commission erred in concluding that there was already a tendency towards collective dominance[35] and that if the post-notification market was competitive then that would militate against the creation of collective dominance. Finally the CFI suggested that it was likely that the post-merger market would remain competitive[36]. Indeed the CFI found that the market was susceptible to small operators increasing capacity[37] which would provide the existence of a competitive impetus to limit the otherwise oligopolistic behaviour of the larger players. A clearer example of market share not implying market power one could not find.

9.8 Accordingly, though the analysis of the Commission was not upheld by the CFI, it is submitted that had the Commission carried out the SLC test properly then the merger in *Airtours/Fist Choice* would have been cleared. There would have been no lessening of competition because the major players (that is the large players) were limited in the monopsony power they could exercise over the seat providers because of the fact that the seat market was and would be competitive post merger. There seems to have been no advantage accruing to the seat providers by dealing with large(er) entities

[34]See ¶89 of *Airtours*.

[35]See ¶108 of *Airtours*.

[36]See ¶231 of *Airtours*.

[37]See ¶¶228-241 of *Airtours*.

and so the merged entity would gain no extra advantage by greater bulk purchasing. This limitation is, it is submitted, key to the would be success of the SLC test had it been applied.

10 Conclusions and Closure.

10.1 The first problem is one of intransigence and the second of one of evidence. Intransigence because the Commission is clearly ignoring the fact that there is a very real gap between the MD test and the economic issues raised by mergers. It is submitted that Vickers (Vickers (2002)) was right in his analysis. Market presence does not necessarily imply market power. Thus the gap, the gap between an assessment of market presence and the existence of market power, is real, exists and must be given recognition. Evidence because there are no comparator cases or, such as there are, do not bring out the unilateral effects and collective dominance issues (as the mergers in question are disallowed or waved through on other grounds). Further there are impediments upon making comparisons between the UK practice under the 2002 Act and the Commission under the regulation.

10.2 Of real importance to the former point (intransigence) is the fact that in the *Airtours* case it has been established (as a thought experiment at least) that the merger would pass the SLC test (*i.e.* the merger would be allowed through). The difficulty is that in *Airtours/First Choice* the merger ought to

have been allowed even on the MD test on the facts it being established that the Commission was not wrong in terms of economic principle. Thus *Airtours/First Choice* and *Airtours* are not really cases which allow for comparisons to be made - though much may be made by understanding how these cases were decided and appealed. Further, in *Airtours* it was clear that small players could have an effect on the relevant market and significantly so. Mere dominance was therefore irrelevant since market structure and operation and an understanding of them were key. Market power is far more important than dominance *per se*.

10.3 What is to be lamented, for the purposes of this dissertation at least, is the paucity of cases where comparisons between the relevant tests can be studied. This is, however, hardly surprising as in many cases the MD test and the SLC test will overlap to enough of an extent to cause the "gap" to be small or papered over. As was said earlier it is the really big mergers where the difference will out. To that extent the Commission can be forgiven for taking the position which is does (as highlighted by Lowe in Lowe (2002)) as there is a cost associated with abandoning MD - almost 40 years of case law though, to be fair Vickers (2002), with some justification, asserts that the relevant case law really only goes back 4-5 years and that there is a great deal of experience around in relation to the SLC test.

10.4 Finally, and almost before the ink on this dissertation was quite dry, the

Commission announced on the 16th of October 2003 that it was seriously considering dropping the MD test in favour of some undisclosed test, which was to be formulated by the end of 2003. This announcement was made at the American Bar Association's trans-Atlantic autumn conference "Dialogues in Law and Practice". Perhaps the Commission is not so intransigent after all.

Appendix A - Differentiated Bertrand Competition.

The Hotelling (1929) model.

Differentiated products may be thought of as being separated in space (either physical or quality) by a distance, s.

At one end product A, is priced at P_a and the other end, B is priced at P_b. The marginal costs of production are C_a and C_b respectively and the overall utilities are V_a and V_b respectively.

Consumers are distributed evenly along the physical or quality line so that at any point along the line, x (from A), there are $N_\Sigma \cdot (x/s)$ consumers to the left and $N_\Sigma \cdot (1-(x/s))$ to the right. N_Σ is the total number of consumers. Assume that each consumer consumes by the unit.

Now introduce a transport cost (or switch cost) £k per unit distance so that for a consumer at x the transport cost to purchase product A is $k \cdot x$. The transport cost can be likened to a switching cost, though it is not a one off cost it is expended every time that the consumer goes shopping.

For the consumer at x (an arbitrary point), the consumer's net utility functions are given by:-

$$U_a = V_a - P_a - k \cdot x$$

$$U_b = V_b - P_b - k \cdot (s-x)$$

where U is the consumer net utility and V is the gross utility. Suffixes are self explanatory.

Hence for the marginal consumer (at point x_m) $U_a = U_b$, or

$$V_a - P_a - k \cdot x_m = V_b - P_b - k \cdot (s-x_m).$$

Let

$$k \cdot \zeta_a = P_a - V_a \qquad \text{(A1)}$$

$$k \cdot \zeta_b = P_b - V_b \qquad \text{(A2)}$$

Hence for the marginal consumer

$$\zeta_b - \zeta_a = 2x_m - s, \text{ or}$$

$x_m = ½(ζ_b - ζ_a + s)$.

To the left of x_m the demand for product A is

$D_a(ζ_a,ζ_b) = N_Σ·(x_m/s) = N_Σ(ζ_b - ζ_a + s)/2s$.

To the right of x_m the demand for product B is

$D_b(ζ_a,ζ_b) = N_Σ·(1-(x_m/s)) = N_Σ(ζ_a - ζ_b + s)/2s$.

Knowing demands, profits may be calculated.

For producer A the profit function is:-

$π_a = (P_a - C_a) · D_a(ζ_a,ζ_b) = (P_a - C_a) · N_Σ(ζ_b - ζ_a + s)/2s$

$= N_Σ/2s · \{(P_aζ_b - P_aζ_a + P_as) - (C_aζ_b - C_aζ_a + C_as)\}$

Differentiating and remembering that, generally, $∂ζ/∂P = 1/k$.

$∂π_a/∂P_a = N_Σ/2s · \{(ζ_b - (P_a/k + ζ_a) + s) + C_a/k\}$.

At extremis

$∂π_a/∂P_a = 0$, *i.e.* $ζ_b - P_a/k - ζ_a + s + C_a/k = 0$, or

$k·ζ_b - P_a - k·ζ_a + k·s + C_a = 0$ . . . . (A3)

substituting (A1) and (A2) into (A3):

$P_b - V_b - 2P_a + V_a + k·s + C_a = 0$

$P_a = ½(P_b + (V_a - V_b) + k·s + C_a)$.

and conversely

$P_b = ½(P_a + (V_b - V_a) + k·s + C_b)$.

At Nash equilibrium

$P_a = P_b = P_N$.

$P_N = (V_a - V_b) + k·s + C_a$.

$P_N = (V_b - V_a) + k·s + C_b$.

And

$P_N - C_a = (V_a - V_b) + k\cdot s.$ . . . . (A4)

$P_N - C_b = (V_b - V_a) + k\cdot s.$

Which implies (as an interesting result) that

$C_b - C_a = 2(V_a - V_b).$

Also, at P_N:

$k\cdot\zeta_a = P_N - V_a$ . . . . (A5)

$k\cdot\zeta_b = P_N - V_b$ . . . . (A6)

$\pi_N = (P_N - C_a) \cdot N_\Sigma(\zeta_b - \zeta_a + s)/2s$ . . . . (A7)

substituting (A5) and (A6) into (A7)

$2s\cdot k\cdot\pi_N = (P_N - C_a) \cdot N_\Sigma(V_a - V_b + k\cdot s)$ . . . . (A8)

substituting (A4) into (A8)

$2s\cdot k\cdot\pi_N = N_\Sigma(V_a - V_b + k\cdot s)^2$ . . . . (A8)

or

$$\pi_N = \frac{\left(\frac{1}{2s}\right) N_\Sigma (V_a - V_b + ks)^2}{k} \qquad \text{. . . . . (A9)}$$

Where π_N is the Nash equilibrium profit.

This tends to imply that if s and N_Σ are constant and $V_a = V_b$ (which are not assumptions that are dangerous to make when there is a degree of substitutability) then Nash profits increase with the transport cost or product differentiation. On these assumptions, when $k\rightarrow 0$ then $\pi_N\rightarrow 0$ which implies homogeneity. However the position is different where overall utilities are different.

If differentiation increases, because perhaps the number of firms decrease then prices rise because the consumer is deprived of choice; as equation (A4) implies.

Appendix B - Cournot Competition.

Drawn generally from Varian (1999:pp 481 & 482).

Suppose that there are n firms, $f_1, f_2, ..., f_n$ each producing outputs $q_1, q_2, ..., q_n$ with a total output of $Q_\Sigma = q_1 + q_2 + ... + q_n$.

For firm i the profit is given by:-

$\pi_i = P(Q_\Sigma) \cdot q_i - C_i(q_i)$.

Differentiating

$\partial\pi_i/\partial Q_\Sigma = P(Q_\Sigma) + q_i \cdot \partial P(Q_\Sigma)/\partial Q_\Sigma - \partial C_i(q_i)/\partial Q_\Sigma$.

Let $C_m(q_i) = \partial C_i(q_i)/\partial Q_\Sigma$ which equates with the marginal cost of firm i producing an output q_i at cost C_i.

At extremis:

$\partial\pi_i/\partial Q_\Sigma = 0$, *i.e.* $P(Q_\Sigma) + q_i \cdot \partial P(Q_\Sigma)/\partial Q_\Sigma - C_m(q_i) = 0$.

or

$P(Q_\Sigma) + q_i \cdot \partial P(Q_\Sigma)/\partial Q_\Sigma = C_m(q_i)$ . . . . (B1)

i.e. marginal revenue = marginal cost.

It may be said that $\partial P(Q_\Sigma)/\partial Q_\Sigma \approx \Delta P(Q_\Sigma)/\Delta Q_\Sigma$ . . . . (B2)

substituting (B2) into (B1).

$P(Q_\Sigma) + q_i \cdot \Delta P(Q_\Sigma)/\Delta Q_\Sigma = C_m(q_i)$.

and re-arranging:

$P(Q_\Sigma) + q_i\ \Delta P(Q_\Sigma)/\Delta Q_\Sigma \cdot P(Q_\Sigma)/P(Q_\Sigma) \cdot Q_\Sigma/Q_\Sigma = C_m(q_i)$.

$P(Q_\Sigma)\ \{1 + q_i/Q_\Sigma \cdot Q_\Sigma/\Delta Q_\Sigma \cdot \Delta P(Q_\Sigma)/P(Q_\Sigma)\} = C_m(q_i)$.

$P(Q_\Sigma)\ \{1 - q_i/Q_\Sigma \cdot 1/\varepsilon(Q_\Sigma)\} = C_m(q_i)$.

Where $\varepsilon(Q_\Sigma)$, the elasticity of demand, is defined as:

$\varepsilon(Q_\Sigma) = \{\Delta Q_\Sigma/Q_\Sigma\}\cdot\{P(Q_\Sigma)/\Delta P(Q_\Sigma)\}$.

or,

$P(Q_\Sigma)\ \{1 - s_i/\varepsilon(Q_\Sigma)\} = C_m(q_i)$ . . . . (B3)

or, in a more usual form:

$$\frac{P(Q_\Sigma) - C_m(q_i)}{P(Q_\Sigma)} = \frac{s_i}{\varepsilon(Q_\Sigma)} \quad \text{. . . . . (B4)}$$

Where s_i is the market share of firm i. Hence if there are a large number of equally sized firms s is virtually zero so that price equates with marginal cost and if there is only one firm then marginal revenue equates with marginal revenue (and prices are monopolistic). For a market structure in between the price is always higher than marginal cost. Hence a decrease in the number of firms will cause prices to increase.

References

Bellamy, C. and Child, G., "European Community Law of Competition" 5th Edition, (edited by Roth, P.) Sweet & Maxwell, 2001; Bellamy and Child (2001).

Bertrand, J., "Théorie Mathématique de la Richesse Sociale" *Journal de Savants* [1883] pp 499-508, Bertrand (1883)

Biro, Z. and Parker D., "A New EC Merger Test? Dominance v Substantial Lessening of Competition" [2002] Comp Law 157; Biro and Parker (2002).

Böge, U. and Müller, E., "From the Market Dominance Test to the SLC test: Are There Any Reasons for a Change?" [2002] E.C.L.R. 495; Böge and Müller (2002).

Bundeskartellamt, "Prohibition Criteria in Merger Control - Dominant Position versus Substantial Lessening of Competition?" Federal Republic of Germany 2001 competition conference[38]; Bundeskartellamt (2001).

Cabral, L.M. B., "Introduction to Industrial Organisation" MIT Press 2000; Cabral (2000).

Cournot, A., "Principes de la Théorie des Richesses." Paris: Hachette 1863. Cournot (1863).

Drauz, G., "Collective Dominance Under the European Merger Control Regulation: The Implications of the *Airtours* Case" Contributor to the American Bar Association Section of Antitrust Law "Brown Bag" Program, November 2003[39]; Drauz (2002).

Edgeworth, F., "La Teoria Pura del Monopolio" *Giornale degli Economisti* **40,** pp 13-31; Edgeworth (1897).

Haupt, H., "Collective Dominance Under Article 82 E.C. and E.C. Merger Control in the light of the *Airtours* Judgment" [2002] E.C.L.R. 434; Haupt (2002).

Hay, D.A. and Morris, D.J., "Industrial Economics and Organization: Theory and Evidence", Oxford University Press 2nd Edition; Hay and Morris (1991).

[38]http://www.bundeskartellamt.de/ProftagText-engl.pdf.

[39]http://www.abanet.org/antitrust/source/nov02/airtours.pdf.

Hotelling, H., “Stability and Competition,” *Economic Journal* **39**(1), pp 41- 57; Hotelling (1929).

Howard, M., “Antitrust and Trade Regulation: Selected Issues and Case Studies” Englewood Cliffs, New Jersey, Prentice-Hall; Howard (1983)

Huck, S.A., Konrad, K.A. and Müller, W. “Big fish eat small fish: on merger in Stackelberg markets” *Economics Letters* **73**(2), pp 213-217; Huck *et al* (2001).

Lowe, P., “The Future of EU Merger Control” [2002] Comp Law 310; Lowe (2002).

Monti, M., “Merger control in the European Union: a radical reform” A speech at the EC/IBA merger control conference, Brussels, November 2002[40]; Monti (2002).

Motta, M., “EC Merger Policy and the *Airtours* Case” [2002] E.C.L.R. 199; Motta (2000).

Nash, J.F. (Jr), “Equlibrium points in *n* - person games’, *Proceedings of the National Acadamy of Sciences* (1950), **36,** 48-9; Nash (1950).

Nickpay, A. and Houwen, F., “Tour de Force of a Little Local Turbulence? A Heretical View on the *Airtours* Judgment” [2003] E.C.L.R 193; Nickpay and Houwen (2003).

Tirole, J., “The Theory of Industrial Organisation” MIT Press 1998; Tirole (1998).

Varian, H.R., “Intermediate Microeconomics - A Modern Approach” 5th Edition, W.W. Norton & Company 1999; Varian (1999).

Vickers, J., “How to reform the EC merger test” A speech at the EC/IBA merger control conference, Brussels, November 2002[41]; Vickers (2002).

Viscusi, W.K., Vernin, J.M. and Harrington J.E, Jr, “Economics of Regulation and Antitrust” 3rd Edition, MIT Press 2000; Viscusi *et al* (2000).

Whish, R., “Collective Dominance”, an essay appearing in *Liber Amicorum Slynn* (O’Keefe, D. ed) at pages 581-609, Kluwer Law International; Whish (2000).

[40] http://europa.eu.int/comm/competition/speeches/index_speeches_by_the_commissioner.html.

[41] http://www.oft.gov.uk/News/Speeches+and+articles/2002/index.htm.

TABLE OF CASES

(Case IV/M.1524) Airtours/First Choice (*Merger Decision*) [2000] 5 C.M.L.R. 494, Official Journal of the European Communities, series L, volume 93 of the 13th of April 2000, pp1 - 33, Commission; *Airtours/First Choice*.

(Case T-342/99) Airtours Plc v. *The Commission of the European Communities* [2002] 5 C.M.L.R. 317, CFI; *Airtours*.

(Joined Cases C-395/96 P and C-396/96 P) (1) *Compagnie Maritime Belge Transports Société Anonyme*, (2) *Compagnie Maritime Belge Société Anonyme* and (3) *Dafra-Lines Aktieselskap* v. *The Commission of the European Communities*, (1) *Grimaldi* and (2) *Cobelfret* (interveners at first instance) and (1) *Deutsche Afrika-Linien Gesellschaft mit beschränkter Haftung & Company* and (2) *Nedlloyd Lijnen Besloten Vennootschap* (applicants at first instance) [2000] 4 C.M.L.R. 1076 ECJ; *CMBT*.

(Case 6/72) Europemballage and Continental Can v. *The Commission of the European Communities* [1973] E.C.R. 215; [1973] C.M.L.R. 199, ECJ; *Continental Can*.

(Case C-68/94) (The Republic of) France v. *The Commission of the European Communities* and *(Case C-30/95) Enterprise Miniere et Chimique (EMC)* v. (1) *The Commission of the European Communities* and (2) *Société Commerciale des Potasses et de l'Azote (SCPA)* [1998] 4 C.M.L.R. 829, ECJ; *EMC*.

(Case COMP/M.2220) GE/Honeywell (*Merger Decision*)[42] Commission; *GE/Honeywell*.

(Case T-102/96) Gencor Limited v. *The Commission of The European Communities* [1999] 4 C.M.L.R. 971, CFI; *Gencor*.

(Case 85/76) Hoffmann-La Roche v. *The Commission of the European Communities* [1979] E.C.R. 461, ECJ; *Hoffman-La Roche*.

(Joined Cases T-68/89, T-77/89 and T-78/89) (1) *Società Italiana Vetro Società per Azioni*, (2) *Fabbrica Pisana Società per Azioni* and (3) *PPG Vernante Pennitalia Società per Azioni* v. *The Commission of the European Communities* [1992] 2 E.C.R 1403 ECJ; *Italian Flat Glass*.

(Case 322/81) Naamloze Vennootschap Nederlandsche Banden Industrie Michelin v. *The Commission of the European Communities* [1983] E.C.R. 3461,

[42] http://europa.eu.int/comm/competition/mergers/cases/decisions/m2220_en.pdf.

ECJ; *Michelin*.

The Federal Trade Commission v. (1) *Staples Incorporated* and (2) *Office Depot Incorporated* 970 F. Supp. 1066 (1997) (Hogan, J. - US District Court for the District of Columbia); *Staples*.

(*Case 27/76)* (1) *United Brands Company* and (2) *United Brands Continental Besloten Vennootschap* v. *The Commission of the European Communities* [1978] E.C.R 207; [1978] 1 C.M.L.R. 429, ECJ; *United Brands*.