# Can the Commission use Article 82EC to Combat Tacit Collusion?

by

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**Abstract:** Recent events suggest that Article 82 may prohibit abusive and tacitly collusive conduct. Yet can the Commission enforce this law? In this article I argue it cannot. I tackle this question of enforcement from the perspective of proof and examine to what extent the Commission can establish the conduct of tacit collusion. I show that proof of tacit collusion requires the Commission to overcome a difficult problem of identification, notably how to distinguish tacit collusion from other very subtle conducts like unconscious parallelism and undetected overt collusion. I argue that the Commission cannot resolve this problem by establishing the typical conditions drawn from case law, such as the lack of effective competition, the *Airtours* criterion and a focal point, as this proof cannot mitigate error sufficiently. This seeks the Commission to produce greater cogency of evidence, yet only at the expense of rendering enforcement prohibitively onerous. I conclude that owing to a problem of proof (detection) Article 82 is unenforceable and can neither punish nor deter tacit collusion. This makes a policy of using Article 82 to combat tacit collusion *ex post* misconceived and suggests that tacit collusion admits only an *ex ante* legal treatment.
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## 1. Introduction

The question I discuss in this article is to what extent the Commission can establish the conduct of tacit collusion in Article 82. It matters because recent developments in EC competition law seem to indicate that Article 82 may prohibit the abusive conduct of tacitly colluding firms. Some law scholars have noted this by suggesting that Article 82's collective dominance encompasses tacit collusion.[1] More recently, the European Court of Justice (ECJ) in the landmark *Sony/BMG* case has confirmed that a group of firms can hold a position of pre-existing collective dominance if they are engaged in tacitly collusive conduct prior to a merger.[2] Beyond the text of the law, however, a policy of tackling tacit collusion in Article 82 need not make sense and has already met some scepticism.[3] Even the Commission in its newly drafted guidelines for Article 82 has not granted enforcement priority to collective dominance, presumably shattering its early proposal of using Article 82 to combat tacit collusion.[4] In this article I reinforce these latter views by arguing that the Commission's inability to establish tacit collusion renders Article 82 unenforceable.

In order to find an Article 82 infringement in tacit collusion, the Commission has to establish that a group of firms (1) has exerted abusive conduct (legal test of the abuse of a position of collective dominance) while (2) colluding tacitly (legal test of the existence of a position of collective dominance

[1] A Jones and B Sufrin, *EC Competition Law* (3rd edn Oxford University Press 2008) 924-30; J Faull and A Nikpay, *The EC Law of Competition* (2nd edn Oxford University Press 2007) para 4.116-4.126; R O'Donoghue and J A Padilla, *The Law and Economics of Article 82 EC* (Hart Publishing, Portland 2006) 146-51; R Whish, *Competition Law* (6th edn Oxford University Press UK 2009) 563-64; N Petit, *Oligopoles, Collusion Tacite et Droit Communautaire de la Concurrence* (Brylant, Bruxelles 2007) 140-44.

[2] Bertelsmann AG v Independent Music Publishers & Labels Association (Impala) (C-413/06 P) [2008] 5 C.M.L.R. 17 (ECJ), paras 117-23 [hereinafter *Sony/BMG*]; F E Mezzanotte,'Tacit Collusion as Economic Links in Article 82 EC. Revisited' 2 ECLR 2009 136-41.

[3] For example, G Monti, *EC Competition Law* (Cambridge University Press 2007) 344-45 (suggesting that the Commission should not enforce cases of tacit collusion in Article 82; Jones and Sufrin (n 1) 924-35 (arguing that problems of proof of tacit collusion, definition of abusive conduct and inadequacy of remedies make enforcement of tacit collusion in Article 82 very difficult); Whish (n 1) 565-67 (discussing several problems of tacit collusion in a context of abuse of collective dominance).

[4] The treatment of collective dominance is not included in the Article 82 guidelines, see *Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings*, 3 Dec 2008, para 2 and 4. In an earlier draft the Commission proposed a definition of collective dominance which included tacit collusion, *DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses*, Public Consultation, European Commission, Brussels (December 2005) 15-17 and para 47-50 (hereinafter DG Discussion Paper).

[hereinafter ECD test]).[5] A discussion of proof of tacit collusion in Article 82 pertains to the domain of the ECD test and captures in the real world the following question of fact: after observing that a group of firms are committing an alleged abuse, can the Commission establish that the actions of these firms are linked by tacit collusion? The literature has long conceived this question as posing a problem of identification, notably how to differentiate tacitly collusive from competitive conduct. In this context, an ECD test seeks the Commission to demonstrate that tacit collusion, yet not competition, is the only cause of interaction linking the conduct of the alleged Article 82 violators.

With courts having yet to define clearly such an ECD test, the literature has typically relied on economic theory to identify key aspects of a test of tacit collusion. In this sense, game theoretic principles illustrate how in a context of repeated interaction firms can suspend competition and collude, and suggest that this collusion can be tacit. Moreover, industrial economists have identified market features the alteration of which may hinder or facilitate the sustainability of tacit collusion.[6] Notwithstanding this theory, scholars point out that economics has only singled out a set of necessary market features whose effects can often be ambiguous and/or difficult to measure.[7] When looking at the extent to which this economic theory can deliver a positive legal test of tacit collusion, they find this very unlikely.[8] More generally, as the

[5] For the conduct of tacit collusion to infringe Article 82 it has to fall within any one of the types of abuses of Article 82, for example, Faull & Nikpay (n 1) 343, para 4.125; O'Donoghue and Padilla (n 1) 162. That tacit collusion of itself should not be deemed abusive conduct can be also read from V Korah, *An Introductory Guide to EC Competition Law and Practice* (8th edn Hart Publishing, Oxford – Portland Oregon 2004) 113; Whish (n 1) 565-66; H Haupt, 'Collective Dominance under Article 82 E.C. and EC Merger Control in the Light of the Airtours Judgment' [2002] 23(9) ECLR 434, 439; M Canoy, P Rey and E van Damme, 'Dominance and Monopolization', TILEC Discussion Paper DP 2004-022, Tilburg University, 65-69; S Stroux, *US and EC Oligopoly Control* (International Competition Law Series, Volume 14, Kluwer Law International 2004) 114-15; Petit (n 1) 448/49.

[6] M Ivaldi et al., *The Economics of Tacit Coordination*, March 2003, Final Report for DG Competition, European Commission; A Scott, M Hviid and B Lyons, *Merger Control in the United Kingdom* (Oxford University Press 2005) 156-64; E Navarro Varona, A Font Galarza, J Folguera Crespo and J Briones Alonso, *Merger Control in the European Union* (2nd edn Oxford University Press 2005) 221-240; A Lindsay, *The EC Merger Regulation: Substantive Issues* (Sweet & Maxwell, London 2006) chapter 8; *Guidelines on the assessment of horizontal merges under the Council Regulation on the control of concentrations between undertakings*, OJ C 31 [05.02.2004] 5-18, para 42-43 [hereinafter *Guidelines on Horizontal Mergers*].

[7] O'Donoghue and Padilla (n 1) 146; Kai-Uwe Kühn, 'Closing the Pandora's Box? Joint dominance after the Airtours' Judgment', in *Pros and Cons of Merger Control*, Swedish Competition Authority 2002, 57-59; Petit (n 1) 201-238 and 443-47.

[8] O'Donoghue and Padilla (n 1) 146; Kühn (n 7) 39-61 ("While we can exclude collusion [negative test] for theoretical reasons there is no way to assert that only collusion is possible under certain circumstances. This makes valid negative and positive tests very asymmetric in structure." *Ibid.*, 57.)

problem of multiple equilibria in the Folk Theorem suggests, not even a market whose features favour collusion can overrule the possibility of competition as firms may have simply (and rationally) chosen to compete.[9]

This implies that the Commission is likely to encounter a great deal of trouble to distinguish tacit collusion from competition. In this article I adhere to this premise yet explain it one step further. The literature has thus far defined the problem of identification by focusing on only two forms of firm interaction, namely competition and tacit collusion. The approach borrows heavily from game theoretic principles which illustrate the difference between vigorous competition – which is usually regarded as the competitive threshold in oligopoly – and collusion. A firm competes vigorously when it maximises short-term profits in a context where its own actions account for the actions of its rivals. As opposed to this, in collusion firms substitute coordination for competition in order to earn monopoly profits. According to these principles, firms have an incentive to collude, for collusion pays more than vigorous competition, and they may achieve this in a context of repeated interaction.[10] But game theoretic principles encounter limitations. While focusing on the distinction between vigorous competition and collusion they fail to capture other relevant forms of firm interaction.

They do not explain unconscious parallel conduct. This conduct denotes a type of firm interaction which falls in between the extreme categories of vigorous competition and collusion. In response to diverse reasons firms are able to dampen the incentive to maximise profits in the short term, yet without turning to collusion.[11] Game theoretic principles do not sufficiently explain types of collusion either, for they fail to show how firms get to collude.[12] Firms

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[9] The problem of multiple equilibria in game theory includes both collusive and non-collusive equilibria, A Mas-Colell, M. D. Whinston and J. R. Green, *Microeconomic Theory* (Oxford University Press 1995) 400-05 and 417-23 (Appendix A); J Tirole, *The Theory of Industrial Organization* (The MIT Press 1988) 245-47; G Werden, 'Economic Evidence on the Existence of Collusion' (2003-04) 71 Antitrust Law Journal 719, 729-34; Ivaldi *et al.* (n 6) 5-11.

[10] Scott *et al.* (n 6) paras 9.04-9.15.

[11] For diverse considerations on unconscious parallel conduct see Office of Fair Trading, *Market Investigation References: Guidance about the making of references under Part 4 of the Enterprise Act*, OFT 511 of March 2006, available at www.oft.gov.uk, paras 2.4, 2.5, 5.5, 5.7 and 6.6 (hereinafter OFT's Guidance on MIR).

[12] R Gibbons, "What the Folk Theorem doesn't tell us", Industrial and Corporate Change, Volume 15, Number 2, 2006, 381-86 at 383-84; Werden (n 9) 730-33 and 763; Canoy *et al.* (n 5) 65.

can suspend vigorous competition and collude, and they can do this either overtly or tacitly. Firms collude overtly where they contact each other in order to coordinate their actions, i.e. they may fix prices by talking to each other. Owing to the illegality of overt collusion under Article 81, firms would want to do this through hidden contacts which the Commission cannot detect (undetected overt collusion). Firms collude tacitly where they manage to engage in and sustain collusion without communicating with each other.

The above suggests that the Commission has to distinguish in practice between not two but rather four types of firm interaction, namely (1) vigorous competition, (2) unconscious parallelism, (3) tacit collusion and (4) undetected overt collusion. This makes the problem of identification more complex. On this basis, I argue that the approach followed by current literature offers an incomplete depiction of the problem of identification for it omits other, subtler forms of firm interaction which are most critical. By defining the problem of identification more widely, this article unearths two meaningful yet largely unnoticed dimensions of it: how tacit collusion differs, on the one hand, from unconscious parallelism and, on the other hand, from undetected overt collusion. These two peculiar dimensions lie at the core of the ECD test in Article 82. They are intimately linked to matters of proof and can make up for a great part of the errors the Commission is exposed to in its decisional practice.

The type I error or false positive is particularly worrisome as the Commission can wrongly find that innocent firms (i.e. firms involved in unconscious parallelism) are colluding tacitly in the relevant market. This can evolve into an error of law as a court may find that the Commission has misapplied Article 82 by wrongly punishing a group of neither single nor collectively dominant firms. If the Commission forms the wrong view that firms are colluding tacitly when in fact they have succeeded in colluding by means of hidden communications, the Commission will likely misdirect the investigation and take the wrong remedial actions because the conduct is ultimately an undetected Article 81 violation. With these serious implications, it is surprising that a discussion of these two components of the problem of identification and how they affect the enforcement of Article 82 in tacit collusion has remained underdeveloped in the literature.

In order to fill this gap, section 3 of this article defines the problem of identification and draws from it three key *questions of fact* that the Commission must establish in order to find the *actual conduct* of tacit collusion.[13] A first, almost preliminary, question is to what extent the Commission can establish that the alleged Article 82 violators are not competing vigorously in the relevant market. Assuming the Commission is able to establish this fact sufficiently, the first dimension of the identification problem follows to the extent that this lack of vigorous competition can be explained by two alternative hypotheses: firms may be either dampening competition (non-collusive conduct) or colluding. The second question is therefore to what extent the Commission can demonstrate that collusion is the only explanation of why firms are not competing vigorously in the relevant market.

I argue that in order to resolve this problem the Commission must show that a mechanism of retaliation exists and that this mechanism is the only cause underlying the choice of firms not to compete vigorously. But not even after producing all this evidence may the Commission establish tacit collusion, as there still remains a second dimension of the identification problem. There is still a chance that the conduct being observed by the Commission is not tacit collusion but rather an undetected Article 81 violation. This introduces our third question: to what extent the Commission can prove that tacit yet not overt collusion drives the alleged abusive conduct of firms. I argue that this problem requires the Commission to show that firms did not communicate to each other in the process of engaging in and sustaining collusion.

[13] It is submitted that in the ECD test tacit collusion may work as 'economic links' between firms, Mezzanotte (n 2) 136-38. Proof of these links apparently seeks for evidence of the actual conduct of tacit collusion, Case Comp/M.3333, *Sony/BMG* [2005] OJ L62/30 (Commission) paras 68-69, 75, 109; Case T-464/04 *Independent Music Publishers and Labels Association* v *Commission* [2006] ECR 00 (CFI) [hereinafter *Impala*] paras 117, 252-4, 260, 264 and 298; O'Donoghue and Padilla (n 1) 152; Petit (n 1) 443-47.

To resolve these three questions of fact can be an overwhelming task for the Commission, however. As I show in section 4 of this article, case law provides little guidance as to how or by what means the Commission can establish that the alleged Article 82 violators are not competing vigorously in the relevant market.[14] Second, proof of the *Airtours* criterion[15] need not establish causality and thus cannot demonstrate that collusion is the only explanation of why firms are not competing vigorously in the relevant market. Third, proof of a focal point does not necessarily disentangle the absence of from hidden communications.[16] Overall, not even by establishing the above set of typical legal conditions drawn from case law can the Commission mitigate sufficiently the chances of error stemming from the problem of identification.

This means that if the Commission aims to succeed in making a case for tacit collusion it has to adduce more evidence, such as proof of the impact of the Airtours' conditions on the conduct of firms and of the viability of the observed conduct to be simultaneously abusive and tacitly collusive. As I argue in section 5, however, to produce this greater cogency of evidence can be far too onerous a burden for the Commission, rendering the enforcement of Article 82 very unlikely. By drawing from the arguments above I conclude in section 6 that due to a problem of proof the Commission can use Article 82 to neither punish nor deter tacitly collusive conduct. This renders a policy of using Article 82 to combat tacit collusion *ex post* misconceived and suggests that tacit collusion admits only an *ex ante* legal treatment.

## 2. The Law and Enforcement of Article 82's Collective Dominance

Article 82 applies to dominant firms. A firm is dominant if it has the capacity or economic strength to engage in business conduct profitably without facing the

[14] Case T-342/99 *Airtours* v *Commission* [2002] ECR II-2585, para 63 (hereinafter *Airtours*); Case T-191/98 *Atlantic Container Line AB and Others* v *Commission* [2003] ECR II-3275 [hereinafter *TACA*] paras 652-654 (citing Airtours' paragraphs 60 and 63).
[15] The *Airtours* criterion is a key legal tool that current law has produced in the context of tacit collusion, *Sony/BMG* (2) paras 124-25; *Airtours* (n 14) para 62.
[16] *Sony/BMG* (n 2) 123.

constraints of competition, like actual/potential competitors and consumers.[17] In other words, this firm is able to influence or control the parameters of competition in the relevant market.[18] In the economic sense of the term, a dominant firm holds substantial market power.[19] Market power is the ability of a firm (or group of firms) to raise prices profitably above the marginal cost of production. In perfect competition the market power of price-taker firms is nil at equilibrium, whereas a price-setting monopolist enjoys the highest possible market power.[20]

Article 82 can also apply to a group of individually non-dominant firms provided that they are found to hold a position of dominance jointly or collectively. By analogy with the case of single-firm dominance, two or more undertakings are collectively dominant in the relevant market if, as a group, they have the economic strength to exercise business conduct profitably without facing the constraints of competition. The notion of collective dominance was first upheld by the Court of First Instance (CFI) in *SIV*.[21] In this case the court concluded that the expression 'one or more undertakings' in Article 82 permits that a position of dominance be held by two or more economically independent undertakings.[22]

Collectively dominant firms have substantial market power jointly; and they are of concern to the law of Article 82 because they may exert abusive conduct in order to maintain or increase this position of market power. In this sense, either a single dominant firm or collectively dominant firms will infringe Article 82 only if they commit abusive conduct.[23] Article 82 enumerates a number of conducts that are abusive as follows:

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[17] Case 85/76 *Hoffmann-La Roche* v *Commission* [1979] ECR 461 para 38.
[18] In this paper I use the terms 'firms' and 'undertakings' interchangeably.
[19] For example, D Geradin et al., 'The Concept of Dominance' in *GCLC Research Paper on Article 82 EC* (College of Europe, Brussels 2005) 8-11; M Motta, *Competition Policy: Theory and Practice* (Cambridge University Press 2004) 41.
[20] Motta, *ibid.*, 40-41. The market power that an undertaking may hold refers not only to power over price but also to power over other variables relevant to competition like output, quality product and innovation.
[21] Cases T-68 77-78/89 *Società Italiana Vetro SpA* v *Commission* [1992] ECR II-1403 [hereinafter *SIV* case].
[22] *Ibid.*, paras 357-59.
[23] Case C-395/96 and C-396/96 *Compagnie Maritime Belge Transports NV* v *Commission* [2000] ECR I-1365, [2000] 4 CMLR 1076 [hereinafter *CEWAL II*] para 35-38; *Hoffmann-La Roche* (n 17) para 91;

(a) directly or indirectly imposing unfair purchases or selling prices or unfair trading conditions;

(b) limiting production, markets or technical development to the prejudice of consumers;

(c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

According to Article 82 (a) a dominant firm would infringe the law if it charges prices that are unfair or imposes unfair trading conditions. Here, a dominant undertaking may exploit consumers, among other things, by setting excessively high prices. Instances of exploitative conduct are viewed as a firm's direct exercise of market power that harms the welfare of consumers. Moreover, Article 82 (b), (c) and (d) encompass exclusionary conduct.[24] A dominant undertaking may want to maintain or increase its position of market power by deterring market entry or foreclosing the market to actual competitors. These practices harm indirectly the welfare of consumers by creating distortions in the process of competition. They reflect the strategic behaviour of firms whose conduct now accounts for the reactions of rivals.[25] Instances of exclusionary conduct include predatory pricing, tying, bundling and refusal to deal, among others.

Article 82 (b), (c) and (d) are in fact defined comprehensively enough to contain most instances of exclusionary abuse.[26] The list of abusive conducts under Article 82 is non-exhaustive and may include – apart from the conduct it defines explicitly – a wide range of other diverse forms of abuse.[27] One of

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Case 6/72 *Europemballage Corpn and Continental Can Co Inc* v *Commission* [1973] ECR 215 para 20-26; Case 322/81 *Michelin* v *Commission* [1983] ECR 3461 para 70.
[24] *Continental Can* (n 23) paras 20-26; *Michelin* (n 23) para 70; Whish (n 1) 200-05.
[25] Canoy et al. (n 5) 22-27.
[26] O'Donoghue and Padilla (n 1) 213-15.
[27] *Ibid.*

them is the practice of raising rivals' costs, which is a non-price predatory strategy. In this practice a firm can under defined circumstances gain or maintain market power by foreclosing the market to rivals through conduct that places them at a cost disadvantage. High costs exclude or marginalise competitors, allowing the dominant firm to reap supra-competitive profits downstream.[28] Practices of raising rivals' costs may include instances of margin squeeze involving input foreclosure,[29] nuisance lawsuits[30] and purchase of exclusive rights,[31] among others.

To the extent that Article 82 explicitly encompasses cases of both single and collective dominance, either a single dominant firm or a group of collectively dominant firms would infringe the law if they engaged in any one of the unlawful conducts of Article 82. For example, while a single dominant firm could unlawfully restrict supply, so could a group of collectively dominant firms. Moreover, this rationale should in theory hold whether collectively dominant firms are united by either links in law (i.e. agreements between firms) or tacit collusion.[32]

In this line of argument, the Commission and part of the literature have pointed out that tacitly colluding firms could infringe Article 82 by engaging in exploitative practices, like charging excessive prices to the direct detriment of

[28] T G Krattenmaker and S C Salop, 'Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price', 96 Yale L J 209 (Dec 1986), 214. A dominant firm or predator profits from cost-raising practices where they cause the price of its output to grow more than its average costs of production; this is a sufficient condition, S C Salop and D T Scheffman, 'Cost-Raising Strategies', The Journal of Industrial Economics, vol. 36, no. 1 (1987), 23; S C Salop and D T Scheffman, 'Raising Rivals' Costs', The American Economic Review, vol. 73, no. 2 (1983).
[29] According to the guidelines input foreclosure can take several forms like (i) refusal to sale, or (ii) margin squeeze, or (iii) degradation of the quality of the input supplied, *Guidelines on the Assessment of Non-Horizontal Mergers Under the Council Regulation on the Control of Concentrations Between Undertakings*, paras 33 and 31-57 (laying down the circumstances under which vertical mergers can cause input foreclosure); Salop and Scheffman (n 28) 268 (considering margin squeeze as a cost-raising strategy).
[30] For example, Miller and Pautler, 'Predation: The Changing View in Economics and the Law' 28 J.L. & Econ. 495 1985, 500; W J Baumol and J A Ordover, 'The Use of Antitrust to Subvert Competition', 28 J.L. & Econ. 247 1985.
[31] Krattenmaker and Salop (n 28) 234-36.
[32] These links allow the Commission to conduct a collective assessment of the otherwise independent market positions of the undertakings. Bear in mind that the CFI in *SIV* stated that independent undertakings can be collectively dominant only if they are united by 'economic links.' *SIV* (n 21) paras 357-59. Later on in *Sony/BMG* the ECJ recognised that the Commission may find a group of firms collectively dominant prior to a merger by establishing that they are engaged in tacitly collusive conduct and cited para 45 in *CEWAL II, Sony/BMG* (n 2) paras 117-123. The ECJ in *CEWAL II* had made explicit that a finding of economic links need not rely on links in law, *CEWAL II* (n 23) para 45.

consumers.[33] Moreover, they could also exert exclusionary actions. Among other conducts, they could deter entry,[34] exclude actual rivals,[35] refuse to deal,[36] and persuade a new entrant to join collusive conduct.[37] When looking at case law of Article 82's collective dominance, the evidence shows, through cases like *CEWAL II* and *TACA,* that the Commission has thus far enforced cases involving the abusive conduct of collectively dominant firms united by links in law between them of the type denoting overt collusion.

In *CEWAL II* the ECJ affirmed the Commission's decision finding that Cewal's members (shipping companies) had infringed Article 82 by pursuing practices that foreclosed the market to its only competitor, the G & C African Liner, while constraining consumer choice.[38] According to the Commission, Cewal had first entered into an exclusive agreement with Ogefrem (the Zairian Maritime Freight Administration) and took repeated action to ensure its implementation and enforcement. Second, it had engaged in a strategy of targeted price cuts in order to exclude its competitor, the so-called 'fighting ships' practices. Third, it used loyalty contracts whose rebate schemes were conditional to shippers transporting 100% of their cargos with Cewal. If shippers opted to hire the G & C African Liner they risked being blacklisted and thus penalised by losing the rebate and normal conditions of cargo transportation.

In *TACA* the CFI found that the TACA agreement among shipping companies infringed Article 81(1) because it fixed rates for inland transport, banned its members from entering into individual service contracts with shippers – ban which made the use of conference service contracts compulsory – and fixed a maximum level of remuneration of freight forwarders. When TACA later on permitted individual service contracts it infringed Article 81(1) EC by restricting

[33] *DG Competition discussion paper* (n 4) para 74; Faull & Nikpay (n 1) 341-43, para 4.118 and 4.124; Whish (n 1) 565-66; Stroux, *US and EC…*(n 5) 115-17; however, Monti (n 3) 335-36 and Petit (1) 455-63.
[34] O'Donoghue and Padilla (n 1) 162-63; Faull & Nikpay (n 1) 343, para 4.124; Petit (n 1) 472-86.
[35] *Ibid.*
[36] O'Donoghue and Padilla (n 1) 162-63.
[37] Petit (n 1) 472-86.
[38] *CEWAL II* (n 23) paras 46-59.

the content of those contracts.[39] Moreover, the CFI affirmed the Commission's finding that the TACA's restrictions on, first, the availability and, later on, the content of individual service contracts violated Article 82 (a) and (b), for they amounted to an unfair refusal to supply and to a restriction on the supply of transport products, respectively.[40]

In both *Cewal II* and *TACA* cases a tariff-fixing conference agreement and the implementation thereof constituted sufficient economic links – of the type involving overt collusion – between shipping companies.[41] In contrast, case law of Article 82 and the decisional practice of the Commission show no case of abusive conduct by firms linked through tacit collusion. This record suggests among other things that tacit collusion in Article 82's collective dominance is not necessarily an enforcement priority to the Commission. And as this article will show, it is very likely that the Commission will maintain this policy in future. For one thing, the Commission's efforts towards a pro-enforcement policy are unlikely to prosper insofar as to establish the conduct of tacit collusion within the scope of the ECD test in Article 82 is far too onerous a burden. In order to substantiate this, the next section jump-starts the analysis by outlining the basic principles underlying the conduct of tacit collusion and by defining the problem of how to identify this conduct.

## 3. Defining the Conduct of Tacit Collusion

### 3.1. An Overview of Game Theoretic Principles

Game theoretic principles explain that in a context of repeated interaction firms may suspend vigorous competition and collude.[42] This distinction between vigorous competition and collusion is critical to the laws of competition. A firm competes vigorously when it maximises short-term profits in a context where its own actions account for the actions of its rivals. Several

[39] The CFI noted that the TACA agreement was blocked exempted insofar as the fixing of rates on maritime transport, while none of the other conducts benefited from either block or individual exemptions, *TACA* (n 14) paras 64-65 and 479-578.

[40] *Ibid.*, paras 1106-1107 and 1090-1191. The CFI however did not find that TACA members had abused of their position of collective dominance by, as the Commission had wrongfully claimed, eliminating the potential competition from Hanjin and Hyundai, *ibid.*, paras 67-69 and 1255-57.

[41] *CEWAL II* (n 23) paras 41-48; *TACA* (n 14) paras 592-627.

[42] Scott et al. (n 6) paras 9.04-9.15.

authors suggest that vigorous competition is the competitive threshold in oligopoly. As Werden put it, "Nash, non-cooperative equilibrium in one-shot game oligopoly models [which denotes vigorous competition] is viewed by economists as depicting a best-case scenario (from society's perspective), in the sense that economists do not expect competition to be more intense than this over the long term."[43] As opposed to vigorous competition, what characterises collusion is that a group of firms are able to work out a way to substitute coordination for competition in order to earn monopoly profits. The incentive to compete vigorously breaks or destabilises collusion as the individual conduct of firms is still driven by the appetite for short-term profits.

Relative to vigorous competition, collusion causes greater harm to the welfare of consumers and society. A hard core cartel's pricing yields monopoly-like welfare losses.[44] Moreover, collusive agreements purported to harm rivals may attach other particular social costs. Here, agreed upon measures to attack rivals and rivals' defensive responses may waste social welfare. Equally, agreements to change the rules of competition may raise consumers' search costs and lower the quality or reduce the variety of products.[45] The welfare costs in the static Cournot model or Bertrand model with capacity constraints or differentiated products illustrate well the costs of vigorous competition. These models predict an equilibrium price in oligopoly which is lower than the monopoly price, but higher than the price in perfect competition.[46] Although the welfare costs of vigorous competition can be higher than those of perfect competition, they are still lower than those of collusion.

With collusion being what the law of competition ought to condemn, a key issue is how to distinguish vigorous competition from collusion in the real world. Game theoretic principles explain this divergence. In the short term, the natural instinct of firms is to compete, yet in the long run a credible threat

[43] Werden (n 9) 760 (straight brackets added); also G Niels, 'Collective Dominance: More Than Just Oligopolistic Interdependence', 2001 ECLR 168-72.
[44] R J Van den Bergh and P D Camesasca, *European Competition Law and Economics* (Erasmus University Rotterdam, Intersentia 2001) 171.
[45] *Ibid.*
[46] Scott et al. (n 6) paras 9.03, 9.07-9.09; Mas-Colell et al. (n 9) 387-400.

of retaliation in a context of repeated interaction can engender collusion. The firm's rational choice to either collude or compete is thus driven by a trade-off between the short-term profits of competition and the expected loss from retaliation.[47]

In the most basic one-stage model, two firms are given a choice to price either high or low. If both firms price high (collusion) they are better off than if both firms price low (vigorous competition), yet firms fail to reach a collusive equilibrium. The reason is that firms distrust each other. Trust is difficult to build because firms cannot communicate with one another and must choose only once. Trust is heavily penalised as well. For example, if one firm prices low whilst the other firm prices high the former is rewarded and gets it all because it captures the whole market whereas the latter gains no profit. The market finds equilibrium when each firm prices low in search of short-term profits, which is a market outcome of vigorous competition. Nonetheless, if rational firms could sustain collusion they would want to do this since collusion pays more than vigorous competition. The firms have, therefore, an incentive to collude.

Firms could benefit from the greater payoffs of collusion if they worked out a way to engage in sustainable collusion.[48] One way for rivals to trust each other to collude is to enter into binding agreements. For example, in the scenario where one firm defects from collusion and turns to vigorous competition by pricing low, the agreement can stipulate a punishment against the defector consisting of a fine the value of which outweighs the benefits of deviation.[49] This fine can defeat the incentive that each firm has to cheat on its colluding partners by rendering deviations unprofitable. But as these types of agreements can be characterised in law as fixing prices, among other things, they are unlawful in the light of competition laws and hence cannot be enforced through courts. This means that self-enforcement is an indispensable property of collusion.[50]

[47] Scott et al. (n 6) paras 9.04-0.22.
[48] *Ibid.*
[49] *Ibid.*
[50] *Ibid.*

Self-enforcement basically means that "…it is in each firm's own interest to do what they collectively prefer."[51] In order to explain self-enforcement game theorists have modelled a future in which firms interact repeatedly over time, meaning that a firm's choice of today has future consequences.[52] A firm that undercuts prices (or deviates) today knows that rivals can react next period by matching the price cut or beyond. This means that a firm will now deviate from the collusive path only if it still finds deviation profitable despite the long-term loss that may derive from rivals' reactions (foregone future profits of collusion).[53]

These basic principles underlying sustainable collusion can be summed up in the notion of coordination conflict. A coordination conflict reflects a clash of opposing incentives: firms can either compete vigorously (enlarge their own piece of the pie) or collude (enlarge the size of the pie).[54] The natural instinct of firms is to compete in the short term, which prevents collusion. But in a context of repeated interaction (long run) a credible threat of retaliation (rivals' reactions) can engender collusion. The coordination conflict embodies this antagonism between the short-term profits of competition and the long-term profits of collusion. More particularly, it is only by virtue of an action/reaction mechanism (retaliation) affecting the profit trade-off between today and the future that firms are able to defeat the incentive to compete, and instead coordinate.

### 3.2. The Problem of Identification

Where the Commission observes that a group of firms are exerting an allegedly abusive conduct it cannot initially differentiate what form of market interaction is linking the actions of these firms. In this sense, firms can interact in the market in different ways, including (i) vigorous competition, (ii) unconscious parallelism, (iii) tacit collusion and (iv) overt collusion. In a context of tacit collusion as 'economic links' within the scope of the ECD test

[51] *Ibid.*
[52] *Ibid.*
[53] *Ibid.*
[54] *Ibid.*

in Article 82,[55] it can be argued that the Commission will have to establish that the conduct of tacit collusion is the only cause, among the several forms of firm interaction, of the alleged abuse; and do this to a reasonable degree of certainty (i.e. more likely than not). Game theoretic principles can help at least in part determining 'what facts' the Commission has to establish in order to resolve this problem of identification.

As discussed earlier, game theoretic principles explain that collusion is a conduct, and that the incentive for firms to behave this way lies in the fact that collusion pays more than vigorous competition. Moreover, they illustrate that the collusive conduct of firms has to be self-enforceable, which occurs through a mechanism of retaliation by which firms are able to defeat the short-term incentive to undercut prices. But while game theoretic principles help us to differentiate vigorous competition from collusion, they do not show the full scope of the problem of identification. More particularly, game theoretic principles fail to capture a situation of uncoordinated or unconscious parallel conduct. Nor do they clearly explain how firms are able to work out a way to collude without talking to each other in the process, which sheds doubt on the validity of the assumption of absence of communication between firms.

A situation of unconscious parallel conduct denotes a type of firm's conduct which falls in between the extreme categories of vigorous competition and collusion. In other words, the conduct of firms is driven by neither the short-term incentive of competing vigorously nor the long-term profits of collusion. For multiple reasons, firms are able to dull the incentive to maximise profits in the short term; they dampen or mute competition, without turning to collusion.[56] According to this, if the Commission observes that a group of firms are not competing vigorously in the relevant market, two alternative explanations are plausible: firms may be either dampening competition (non-collusive conduct) or colluding. The thin line dividing unconscious parallelism from collusion, particularly from tacit collusion, adds complexity to the identification problem.

[55] Mezzanotte (n 2).
[56] OFT's Guidance on MIR (n 11) paras 2.4, 2.5, 5.5, 5.7 and 6.6.

With regards to the distinction between tacit versus overt collusion, while game theoretic principles focus on the mechanism by which firms are able to sustain collusion they fail to explain how firms engage in collusion in the first place.[57] As Gibbons points out, the Folk Theorem does not explain the process of building or changing equilibria.[58] Similarly, Werden explains that how players learn about the game and how they get to collude is unclear.[59] Nor is the question by what means firms are able to sustain collusion a central tenet of game theoretic principles. Under what circumstances and to what extent the assumption of absence of communication between colluding firms, which is inherent to the notion of tacit collusion, can hold in the real world is not apparent.

In this sense, if the Commission observes in practice that a group of firms is not competing vigorously in a market whose features facilitate collusion, and suspects the existence of tacitly collusive conduct, it can find it very difficult to realise whether firms have talked to each other or not in the process of building and sustaining collusion. Note that the illegality of overt collusion under Article 81 encourages firms to hide incriminating evidence of communication away from the Commission, meaning that there could be overt collusion in the market even when the Commission gathers insufficient or no evidence to this effect (undetected overt collusion). In short, how the Commission can differentiate the absence of from hidden communications between firms is not evident, which further exacerbates the problem of identification.

From our early analysis of game theoretic principles, the Commission would initially have to satisfy three conditions in order to establish the conduct of tacit collusion in the ECD test in Article 82: firms have to be able to (1) defeat the incentive that each firm has to compete in the short term, and do this (2) through a mechanism of retaliation (self-enforcement) and (3) without

[57] Canoy et al. (n 5) 65.
[58] Gibbons (12) 381-86 at 383-84.
[59] Werden (n 9) 730-33 and 763.

communicating with each other. Our discussion of the problem of identification has qualified these set of conditions, particularly conditions (2) and (3). This leads us to refine the conditions listed above as follows: for there to be tacit collusion the Commission has to demonstrate that:

(1) Firms are not competing vigorously in the market;
(2) The presence of a self-enforcing mechanism of retaliation is the direct explanation of the lack of vigorous competition, thereby excluding a hypothesis of unconscious parallelism; and
(3) Firms have been able to engage and sustain collusion without using tactics of overt collusion.

In the next section I discuss to what extent the Commission can establish these three facts.

## 4. Discussing Proof of the Conduct of Tacit Collusion

As outlined in section 3 proof of three facts is necessary to establish the conduct of tacit collusion: the Commission has to demonstrate that (1) vigorous competition in the relevant market is lacking, that (2) this absence of vigorous competition is not explained by reasons other than the presence of a self-enforcing mechanism of retaliation, and that (3) firms have been able to engage in and sustain collusion without using tactics of overt collusion. In this context, this section examines to what extent the Commission can establish these facts.

### 4.1. The Lack of Vigorous Competition

As discussed earlier, vigorous competition and collusion are two distinctive types of firm interaction. According to game theoretic principles the fact that firms have built and sustained collusion presumes that they have suspended vigorous competition, for each firm has no incentive to maximise profits in the short run. Translating this situation into the practice, what the Commission should observe is a market whose oligopolistic firms do not show the signs of vigorous competition, i.e. prices remain stable over a long period of time or vary in parallel without evidence that firms are undercutting their rivals' prices aggressively.

The CFI does not ignore the relevance of this condition in tacit collusion. In the *Airtours* case it pointed out that what characterises a finding of the existence of a position of collective dominance is the lack of effective competition between rivals, and that this can be achieved by means of tacit collusion.[60] By discussing the theory of indirect proof of the *Airtours* criterion, the CFI in *Impala* sought the Commission – which bears the burden of proof – to establish, among other conditions, 'the absence of an alternative reasonable explanation' to the alleged tacitly collusive conduct.[61] From a different angle, law scholars have noted that a position of collective dominance in tacit collusion basically entails 'the absence of internal and external effective competition among undertakings'.[62] Despite this broad recognition, the law has yet to meet expectations. It contains problems of definition insofar as it remains unclear how much competition the 'lack of effective competition' entails.[63] Nor has this author found in EC case law and legal documents clear evidence indicating how the Commission should establish this conditions.

According to game theoretic principles, in order to establish that firms are not competing vigorously in the market the Commission could show – by gathering and analysing economic data[64] or any other means of proof – that any one or all of the firms have failed to undercut prices despite this being a

[60] *Airtours* (n 14) para 63; *TACA* (n 14) paras 652-654 (citing Airtours' paragraphs 60 and 63).
[61] *Impala* (n 13) paras 251-54; *Sony/BMG* (n 2) paras 104 and 128-29 (the ECJ did not reject this theory); F E Mezzanotte, 'Direct Versus Indirect Proof of the *Airtours* Criterion in *Impala*', 31 W. Comp. 4 2008 523-40.
[62] J Temple Lang, 'Oligopolies and Joint Dominance in Community Antitrust Law' 2001 Fordham Corp. L. Inst. 269 (B. Hawk, Ed. 2002), 269; H Haupt (n 5) 440; O'Donoghue and Padilla (n 1) 137.
[63] Geradin et al. (n 19) 35-36.
[64] Petit (n 1) 547-51 (arguing that the Commission could utilise empirical analysis to establish the existence of tacit collusion within the scope of the ECD test in Article 82); however Kühn (n 7) 52-59 (arguing that the CFI's judgment in *Airtours* highlighted the profound problems that the empirical validation of claims brings about particularly in cases of collective dominance); and Kai-Uwe Kühn, "Fighting Collusion by Regulating Communication between Firms" Economic Policy April 2001 169-2004, 175-79 (arguing that collusive behavior has to be regarded as unobservable or at least unverifiable for the purpose of competition policy as this conduct cannot be inferred from market data without substantial error).

profitable short-term strategy.[65] Similarly, it could also demonstrate that the conduct of firms differs from that of a maverick firm, implying that they have foregone the instinct for short-term profits.[66] The Commission can also produce economic models indicating that given the circumstances of the case the firms' conduct finds no competitive explanation.[67] It may also show that parallel increases in prices are not driven by common exogenous shocks, like the changes in input prices affecting all suppliers uniformly or inflationary pressures,[68] that price parallelism stays despite changes in costs and/or demand suggesting otherwise,[69] that secret discounting is lacking,[70] as well as that oligopolists are persistently making excessively high profits.[71]

The proof of the lack of vigorous competition between firms is not a sufficient condition to establish that firms are colluding tacitly, however, for at least two alternative explanations can explain this outcome. One explanation may suggest that firms have shifted their conduct from vigorous competition to collusion as a direct result of the existence of a mechanism of retaliation of the type sought for there to be collusion. Another plausible explanation could say that multiple reasons other than collusion could have led firms to dampen competition. This can be the case of unconscious parallelism through which the firms mute the rivalry they could have otherwise used to gain a greater customer base at the expense of competitors.[72] In this context, the ECD test in Article 82 should be able to distinguish between the hypotheses of unconscious parallelism and tacit collusion.

In order to demonstrate that tacit collusion is the only cause of the lack of vigorous competition in the relevant market, the next task of the Commission is to establish the existence of the mechanism of retaliation and, as this article

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[65] Scott et al. (n 6) para 9.03.
[66] W J Kolasky, 'Coordinated Effects in Merger Review: from Dead Frenchmen to Beautiful Minds and Mavericks', US Department of Justice, Washington DC, 24 April 2002.
[67] With respect to the *Impala* case at least one commentator has responded to the CFI's concerns at paragraph 253 by claiming that the lack of lower prices in presence of falling demand can be explained by competition and need not result from coordinated effects, see S Pilsbury, 'The *Impala* decision: An Economic Critic', ECJ Vol.3 No.1 June 2007 31-47, 46.
[68] Motta (n 19) 186-87; OFT's Guidance on MIR (n 11) para 6.7.
[69] *Ibid.*, OFT.
[70] *Ibid.*
[71] *Ibid.*
[72] *Ibid.*, paras 2.4-2.5, 5.5, 5.7 and 6.6.

will argue, the causality between this mechanism and the firm's choice not to compete vigorously.

## 4.2. The Mechanism of Retaliation: the *Airtours* Criterion and the Need for Causality between Market Structure and Firms' Conduct

### 4.2.1. State of Law

The economic analysis of collusion has focused on two factors: the mechanism of self-enforcement (or mechanism of retaliation) and how the conditions of the market can limit this mechanism.[73] As a result, economists have explained self-enforcement by identifying those market features whose alteration may hinder or facilitate the sustainability of collusion. A critical question is how the structure of the market may influence a firm's choice, in a setting of dynamic or repetitive interaction, to either deviate from or adhere to the collusive path. In this context, it is settled that the *Airtours* criterion lists a number of conditions that are necessary for firms to sustain collusion.[74]

*Airtours* is a landmark case in which the CFI dismissed a Commission decision to block the merger between Airtours and First Choice in the UK market for short-haul foreign package holidays. The court concluded that the Commission had failed to establish that the merger if approved would have created a position of collective dominance on the part of Airtours/First Choice, Thompson and Thomas Cook. In relation to the legal treatment of tacit collusion, the CFI defined the *Airtours* criterion.[75] It consists of three conditions – market transparency, retaliatory mechanisms and lack of competitive pressures from outsiders to the oligopoly – that the Commission has to establish in order to find that collective dominance exits.

In the aftermath of *Airtours* the guidelines on horizontal mergers built on these principles. The guidelines explain, for example, that market transparency can

[73] Kühn (n 64) 172-75.
[74] *Airtours* (n 14) paras 62, 159, 192 and 210; *Sony/BMG* (n 2) para 117-24; *Guidelines on Horizontal Merges* (n 6) paras 41, 44-57.
[75] *Airtours* (n 14) para 62.

facilitate monitoring and the prompt detection of deviations.[76] It is often a function of the number of firms in the market and the manner in which transactions are entered into (i.e. public exchange as opposed to private and confidential negotiations).[77] Moreover, a credible threat of retaliation is critical to sustain coordination.[78] A threat of retaliation is more credible depending on the speed with which retaliation can be implemented (i.e. effective retaliation is discouraged by infrequent and large volume orders),[79] on the existence of an incentive to retaliate,[80] and on multi-market contacts.[81] The stability of coordination can also be jeopardised where firms which are outsiders to the alleged collectively dominant undertakings (the fringe) have the ability to expand capacity, or where the market lacks entry barriers or there exists countervailing buyer power.[82]

More recently, in the *Sony/BMG* case the Commission and the Courts have applied the *Airtours* criterion in the context of the legal test of preexisting collective dominance. A key issue in this case was whether or not the five major undertakings in the market for recorded music – namely Sony, BMG, Universal, EMI and Warner – were colluding tacitly on prices prior to the merger of Sony and BMG. The Commission had initially found that the relevant market was insufficiently transparent for tacit collusion to occur.[83] But according to the CFI, the Commission failed to establish this claim to the requisite legal standard.[84] The ECJ has now concluded that the CFI had erred in law because it misapplied the test of market transparency.[85] More particularly, the ECJ said that the CFI conducted an assessment of the transparency of the market without considering sufficiently the availability of a monitoring mechanism as part of a plausible theory of tacit collusion.[86]

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[76] *Ibid.*, para 49.
[77] *Ibid.*, para 50.
[78] *Ibid.*, para 52.
[79] *Ibid.*, para 53.
[80] *Ibid.*, para 54.
[81] *Ibid.*, para 55.
[82] *Ibid.*, para 56-57.
[83] *Sony/BMG* (Commission) (n 13).
[84] *Impala* (CFI) (n 13).
[85] *Sony/BMG* (n 2) paras 113, 125-26, 129-31.
[86] *Ibid.*, para 130.

In this case, the ECJ confirmed the validity of the *Airtours* criterion and stated that the explanatory power of it is not incompatible with proof of actual tacit collusion.[87] Moreover, it also refined the legal test of market transparency and of retaliation. With respect to the test of market transparency, the ECJ stated that the analysis of the sustainability of tacitly collusive conduct needs

> …to take into account the monitoring mechanisms that may be available to participants in the alleged tacit coordination in order to ascertain whether, as a result of those mechanisms, they are in a position to be aware, sufficiently precisely and quickly, of the way in which the market conduct of each of the other participants in that coordination is evolving.[88]

As to retaliatory mechanisms, the CFI had concluded that the mere existence of credible deterrent mechanisms sufficed to establish the condition of retaliation listed in Airtours' paragraph 62, and that the Commission need not adduce proof of a firm's threat of use or effective use of retaliatory mechanisms.[89] Although the ECJ did not consider this point explicitly, the way it has defined retaliation as part of the *Airtours* criterion appears to lend support to the CFI's approach.[90] Finally, the CFI, with approval of the ECJ, has also stated that the *Airtours* criterion can be established not only by means of direct evidence but also indirectly. Although the court laid down guiding principles as to how this theory of indirect proof should function, this issue remains unclear and merits further discussion.[91]

### 4.2.2. Discussing Causality

One could argue that the focus of the *Airtours* criterion rests on the structure of the market. This is because direct proof of it establishes key structural market features, including the existence of mechanisms of transparency and retaliation, inability of rivals to expand capacity, existence of barriers to entry and powerless consumers. From proof of the criterion it can follow that rival oligopolists can sufficiently monitor each other's conduct and that they have the capacity to react aggressively and in a timely fashion to each other's

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[87] *Ibid.*, paras 124-25.
[88] *Ibid.*, para 126.
[89] *Impala* (n 13) paras 57, 101-02, 111 and 464-73.
[90] *Sony/BMG* (n 2) paras 123-24.
[91] Mezzanotte (n 61).

competitive actions; this taking place in a context where collusion can be profitable insofar as neither the fringe nor potential entrants nor the consumers can undermine profits. The aggregate of these conditions is thought to make collusion easier to sustain; as such, proof of them strengthens the hypothesis of tacit collusion by making it more likely that firms are actually engaged in and sustaining tacit collusion in the market.

This is not to say, however, that the direct proof of the *Airtours* criterion can establish sufficiently the hypothesis of tacit collusion. For there to be sufficiency, the Commission would have to establish further facts. It is not apparent, for example, how the Commission will be able to convince a judge of its case without showing that collusion is the only cause of why firms are not competing vigorously in the relevant market. In the absence of this proof of causality the Commission cannot reject the existence of other plausible explanations, such as unconscious parallelism.

Proof of causality is thus essential. Yet how to establish this causality is neither evident nor inexpensive. Intuitively, this proof has to show the critical bondage in the chain of inference linking the Airtours' conditions (structure) and the lack of vigorous competition in the market (conduct). Here, the Airtours' conditions must impact significantly on the decision of each firm not to compete vigorously.[92] EC case law does not provide clear guidance on how to prove this. When discussing the *Airtours* criterion in a context of tacit collusion, it appears to be the case that the courts have not yet emphasised on proof of causality.

The ECJ in *Sony/BMG* pointed out that the conditions listed in the *Airtours* criterion has to be examined not in isolation but rather in the context of a plausible theory of tacit coordination.[93] To what extent this statement might

[92] In discussing the proof of the Airtours' condition of retaliatory mechanisms within the context of the ECD test in Article 82, Geradin et al. claims that "The backward looking nature of Article 82 allows a better assessment of whether the collective action is the direct consequence of the existence of a retaliatory mechanism. Therefore, the Commission should be required, unlike under the EMCR test, to show that a specific retaliatory mechanism existed and exerted a deterrent effect that led the oligopolists to stick to a common line of action." Geradin et al. (n 19) 34-35 at 35.
[93] *Sony/BMG* (n 2) paras 125 and 129.

implicitly seek the Commission to establish causality is difficult to say. While the ECJ in this case defined the test of market transparency in terms of the *availability* to participants of a monitoring mechanism,[94] the appellants had proposed a wider definition of the test of transparency by arguing that in the context of actual tacit collusion the Commission has to establish not only the existence of this mechanism but also that firms have used it for the purpose of colluding.[95] This latter approach comes closer to proof of causality. The CFI in *Impala* stated that the Commission can establish the condition of retaliation sufficiently by proving the mere existence of a credible retaliatory mechanism and need not adduce proof either of a firm's threat of use or effective use of retaliatory actions.[96] Yet this latter proof (i.e. proof of a deviation and of the ensuing retaliatory action) could to some extent contribute to establishing causality.

Nonetheless, by putting together the evidence of lack of vigorous competition and of the *Airtours* criterion, including proof of causality, the Commission may still fall short of demonstrating that firms are practicing tacit yet not overt collusion. Put differently, there is still a chance that the conduct being observed by the Commission is not tacit collusion but rather an undetected Article 81 violation. In order to look at this point, it is critical to discuss a key feature of the theory of tacit collusion, namely the assumption of lack of communication between firms.

### 4.3. The Absence of Communication

Proof of the lack of effective competition in a market whose structure favours self-enforcing collusion need not demonstrate the type of collusion involved: this evidence can point indistinctively at the existence of either a hard core cartel or tacit collusion. In turn, how to substantiate the hypothesis of tacit collusion is not apparent to the Commission to the extent that game theoretic principles do not explain how firms can work out a way to reach common terms of coordination without communicating with one another. This problem

[94] *Ibid.*, para 126.
[95] *Ibid.*, para 110-12.
[96] *Impala* (n 13) paras 57, 101-02, 111 and 464-73.

poses at least two questions: first, whether the Commission has any way to establish in law that firms are colluding while meeting the assumption of absence of communication; and second, how strong this assumption can be in the real world.

### 4.3.1. Proof of the Absence of Communication

Economists have identified some features of the market that can make it easier for firms to reach the terms of coordination without resorting to tactics of overt collusion. In transparent markets, for example, firms can better monitor each other's actions. Fewer and more symmetric firms can overcome coordination problems more easily.[97] Importantly, the existence of a focal point makes it easier for firms to collude tacitly as well. According to the guidelines, where a focal point exists competitors can more easily identify a collusive equilibrium and thus become aware of the actions they need to carry out in order to coordinate.[98] The need of a focal point for there to be tacit collusion has more recently been explicitly stated by the ECJ in *Sony/BMG*. The court said that,[99]

> Such a tacit coordination is more likely to emerge if competitors can easily arrive at a common perception as to how the coordination should work, and, in particular, of the parameters that lend themselves to being a focal point of the proposed coordination. Unless they can form a shared tacit understanding on the terms of the coordination, competitors might resort to practices that are prohibited by Article 81 EC in order to be able to adopt a common policy on the market.

Following *Sony/BMG* one would expect that the Commission would not make a case for tacit collusion unless it identified a plausible focal point for coordination as this would make its hypothesis of investigation more plausible in the real world. According to the guidelines, firms will be more likely to identify a focal point in tacit collusion when the economic environment is less complex and more stable (like reduced number of players, homogeneous

[97] S Davies, M Olczak and H Coles, "Tacit collusion, firm asymmetries and numbers: evidence from EC merger cases." CCP Working paper, No. 07-7 (2007); S Davis and M Olczak, "Tacit versus overt Collusion Firm Asymmetries and Numbers: What's the Evidence?" CCP Working Paper, No. 08-32 (2008).
[98] *Guidelines on Horizontal Mergers* (n 6) para 44.
[99] *Sony/BMG* (n 2) para 123.

product, stability in the conditions of demand and supply and lack of innovation), firms are more symmetric (cost, market shares, capacity and levels of vertical integration), and there is structural links between firms (like cross-shareholding or participation in joint ventures), among others.[100]

Proof of the existence of a focal point and of particular features of the market facilitating the identification of it can certainly show that firms can find it easier to reach common terms of coordination. The weak side of this evidence is that it still cannot rule out the possibility that firms talked to each other in the process of identifying the focal point and maintaining collusion.[101] With evidence rejecting the hypothesis of overt collusion being very difficult to produce, the Commission should at least adduce evidence showing that given the circumstances of the case under investigation the firms involved can plausibly carry out the alleged abuse through tacit instead of overt collusion. It is pointless to use Article 82 to combat scenarios where because of the nature of the conduct tacit collusion is unviable. This leads us to examine briefly the strength of the assumption of absence of communication.

### 4.3.2. Strength of the Assumption of Absence of Communication

As pointed out in section 3 of this article, game theoretic principles do not consider the question of how firms manage to identify the initial terms of coordination and sustain them without talking to each other. Even so, the theory underlying the problem of strategic uncertainty from multiple equilibria in game theory coupled with evidence from experimental economics suggest that the assumption of 'absence of communication' in tacit collusion can be strong.[102]

[100] *Guidelines on Horizontal Mergers* (n 6) para 45-48. In *Sony/BMG*, for example, the Commission deemed the pricing of CDs through Published Prices to Dealers (PPDs) as a likely focal point for tacit collusion, for these net prices were publicly available, while only a few numbers of pricing points accounted for at least half of the annual sales of the major firms in each one of the countries investigated. But the Commission ultimately found a widespread practice by the major firms of favoring clients with secret campaign discounts over the PPDs, *Sony/BMG* (Commission) (n 13) para 183; *Impala* (CFI) (n 13) paras 291, 339, 542-43.

[101] From a different angle, a theory based on focal points could not in general rule out a hypothesis of competition either, A Mas-Colell (n 9) 404-52.

[102] Kühn (n 64).

The basic theorem underpinning repeated games, the Folk Theorem, says that in repeated interaction collusion can be sustained – Nash, collusive equilibrium of the repeated game – provided that the firms are sufficiently patient (i.e. discount factor (δ) takes a sufficiently high value).[103] The problem is that if δ is sufficiently high multiple collusive outcomes can be sustained.[104] Kühn argues that in the presence of multiple equilibria firms wanting to collude yet lacking common knowledge of planned conduct may face strategic uncertainty about the rival's likely play and thus struggle to find out the common terms of coordination: "[h]ow can one firm be sure that the other will play the 'right' equilibrium strategy or be sure that the other firm understands that it understands what should be played?"[105] In order to overcome this problem of coordination, the author concludes, firms are likely to communicate.[106]

This rationale is seemingly consistent with evidence from experimental economics indicating that communication matters for collusion, not least because collusion can be less successful and profitable in the absence of it.[107] It is also congruent with further experimental evidence suggesting that collusion is not easy without communication.[108] This blend of theory and experimental evidence seems to undermine the plausibility of the conduct of tacit collusion. In the context of Article 82, this indicates that firms in their every day business practices can find very difficult to exert abusive conduct

[103] Repeated games account for δ due to the assumption that in repeated interaction over time firms maximise the discounted value of profits. Thus the size of the discount factor is important because it affects the weight of future losses relative to the gains of short term defection. It tells how important the future is for the firms relative to the short term prospects. The value of δ is less than 1. As the value of δ moves towards the unit the future is more important and defection by undercutting the price of colluding partners is less profitable; firms become more patient, incentives to deviate weaken and collusion is more self-enforceable, A Mas-Colell (n 9) 400-03.

[104] *Ibid.*, 403-05 and 417-23 (Appendix A). The larger is the value of δ the greater the set of possible equilibriums and profit levels at which collusion can be sustained; the multiple outcomes can include both collusive and non-collusive equilibria, "The presence of multiple equilibria…is common in infinitively repeated games, "[t]ypically, a range of cooperative equilibria is possible for a given level of δ, as is a complete lack of cooperation in the form of the static Nash equilibrium outcome repeated forever." *Ibid.*, 404.

[105] Kühn (n 64) 181 (straight brackets added); similarly, "The wide range of equilibria in repeated game models is somewhat disconcerting. From a practical point of view, how do we know which equilibrium behavior will arise? Can 'anything happen' in oligopolistic markets?" Mas-Colell et al. (n 9) 404.

[106] Kühn (n 64) 181-84.

[107] *Ibid.*, 182-83.

[108] M Stenborg, 'Forest for the Trees: Economics of Joint Dominance' European Journal of Law and Economics 18: 365-385 2004, 376-83 (reviewing the findings of experimental economics as regards to collusion).

while colluding tacitly and, therefore, that cases of this type, if any, are likely to be very exceptional.

Although a discussion on the strength of the assumption of 'lack of communication' between firms in tacit collusion is underdeveloped in the literature and merits further research, the law literature on Article 82 has already shown contradictory positions on this point. For example, while some scholars have subscribed to the notion that tacitly colluding firms could plausibly exert exclusionary abuses,[109] others appear more sceptical.[110] In other instances, this literature has shown greater consensus. More particularly, several scholars have pointed out that a single firm, which is part of a group of collectively dominant firms (tacitly colluding firms) and acts on behalf of the group, could exert exclusionary conduct in order to either react to internal deviations or protect the group's market position from outsiders.[111] In order to discuss the validity of this argument, consider first an example of it in a context of overt collusion.

In the *Cewal II* case, Cewal pursued a policy of selective price cuts against its only competitor G & C African Liner (G & C) through the practice of fighting ships. Cewal's vessels whose schedule coincided with that of G & C would break ranks from the conference's uniform freight rate in order to match or defeat the competitor's lower price. This practice entailed a revenue loss for the individual firm which was nonetheless shared among all Cewal's members. To this effect, every two months members of Cewal would meet within the frame of a 'Special Fighting Committee' in order to designate the fighting ships and agree on price cuts and loss-sharing.[112] The CFI and ECJ

[109] O'Donoghue and Padilla (n 1) 162-63; Faull & Nikpay (n 1) 343, para 4.124; Petit (n 1) 472-86.
[110] Jones and Sufrin (n 1) 930-34; RBB Economics, 'Response to the DG Competition Discussion Paper on the Application of the Treaty to Exclusionary Abuses', March 2006, 24-25 (in file with this author).
[111] O'Donoghue and Padilla (n 1) 161-62 (also warning that there has to be a link of causality between the individual action and the group's coordinated policy); *DG Competition Discussion Paper* (n 4) paras 74-75; Jones and Sufrin (n 1) 932-35 and 938; Petit (n 1) 483-84 (however, notes 534 and 537). The legal basis for this approach is the *Irish Sugar* case whereby the CFI said that the action of only one firm within the group of collective dominant firms can constitute abuse of collective dominance so long as this individual action is the manifestation of the common policy of the collectively dominant undertakings, Case T-228/97, [1999] ECR II-2969, para 66.
[112] 93/82/EEC Commission Decision 23/12/1992, paras 32 and 73-83.

condemned Cewal's policy of selective price cuts as abusive insofar as it was aimed to force the exit of Cewal's only rival.[113]

Note how this practice of fighting ships involved successive actions of individual firms being carried out on behalf of the group (Cewal) and meant to exclude an actual competitor (G & C). Two features characterise this practice: firstly, firms held a position of collective dominance (Cewal) through links in law (conference agreement and the implementation thereof) and, secondly, they communicated with each other through the Special Fighting Committee. Whereas this exclusionary conduct can make sense in the case of collectively dominant firms united by links in law it can often be implausible in the context of tacit collusion. Here, a scenario of abusive conduct carried out by one firm on behalf of the group of tacitly colluding firms seeks for those firms not to communicate with each other. The abusive conduct of predation in oligopoly can illustrate an instance where this is unlikely.

By following the Cewal line of reasoning, consider a group of oligopolists that are successfully self-enforcing tacit collusion on prices, the stability (profitability) of which is being threatened by the actions of an actual competitor (i.e. a maverick firm). Assume that the colluding firms are able to understand the need to exclude this competitor, select predation as the best strategy and work out how to implement it: one single firm predates on behalf of the group. This strategy is unlikely to succeed, however, unless firms use tactics of overt collusion, as predation by a single firm encounters serious hurdles in this context.

The single predator will have to price below cost in order to force an as-efficient rival to exit the relevant market. This entails that the predator is ready to suffer a heavy short-term loss – as it picks up not only the customers of the prey but also those of the other colluding firms and each and all of these sales entail a loss – in order to allow the group of tacitly colluding firms to charge supra-competitive prices once the rival exits. Here, it is unlikely that the single

[113] Case T-24/93 *Compagnie Maritime Belge Transport NV* v *Commission* [1996] ECR II-1201, paras 113-53 (*CEWAL I*); *CEWAL II* (n 23) paras 99-121.

firm will engage in and sustain predation without sharing the loss with the group of tacitly colluding firms, for predation is likely to prove either unviable (lack of financial capacity to bear the whole short-term financial burden of predation) or unprofitable (rivals share the benefits yet not the costs of predation). There is also a risk that if the tacitly colluding firms misinterpret what is going on, collusion becomes unstable. For example, following a price cut by the single predator, they might see a defection from the common price policy for what was actually a predatory action by one of their peers against the maverick firm.[114]

This example shows that the assumption of lack of communication between firms can in some cases be strong. The likely need for a mechanism administering side payments brings coordination into the arena of overt collusion. Likewise, firms are likely to communicate with each other as they find it very difficult to distinguish predatory actions from deviations.

## 5. Enforcement Implications

In section 3 I identified two key dimensions of the problem of identification: how to differentiate tacit collusion from (1) unconscious parallelism and from (2) undetected overt collusion. In Section 4 I explained diverse reasons why the Commission can resolve this problem only insufficiently. First, while the case law suggests that a legal test of tacit collusion may seek for proof of the lack of effective competition between firms, it nonetheless provides no guidance as to how or by what means the Commission could satisfy this burden. Second, proof of the *Airtours* criterion as it stands in current law need not establish the causality between the existence of a mechanism of retaliation and the decision of the allegedly colluding firms not to compete vigorously. Third, not even by aggregating these two elements of proof could the Commission realise whether collusion is driven by the lack of, as opposed

[114] O'Donoghue and Padilla (n 1) 162 note 259.

to hidden, communications; proof of a focal point would not necessarily help to resolve this problem.

This means that if the ECD test in Article 82 sought for the cumulative proof of (1) the lack of effective competition, of (2) the *Airtours* criterion and of (3) a focal point, the test would still give rise to undesirable error. The Commission can wrongly find that innocent (competing) firms are colluding tacitly in the relevant market (error type I). This error can create the wrong incentives: if innocent firms can anticipate that they will be punished anyway whether they collude or not, they will collude.[115] It can also lead to an error of law if the courts found that the Commission, by virtue of Article 82, has wrongly punished a group of neither single nor collective dominant firms lacking the 'special responsibility' not to abuse. From the perspective of the distinction between tacit and overt collusion, by forming the wrong view that the allegedly colluding firms did not talk to each other when in fact they succeeded in doing this secretly, the Commission risks misdirecting the investigation (i.e. it sees excessive pricing in tacit collusion for what it actually was: an undetected price-fixing cartel) and taking misguided remedial action.

In its decisional practice the Commission would want to avoid making mistakes of this sort, which may require it to produce additional evidence targeting the conduct of firms. As this paper has argued in Section 4, this may include proof of the impact of the Airtours' conditions on the choice of firms not to compete vigorously. It may also include a demonstration that firms can viably exert the alleged conduct of abuse while colluding tacitly. All this evidence adds up to the Commission's already heavy burden of demonstrating the lack of effective competition, the capacity of the structure of the market to sustain collusion as well as the existence of an identifiable focal point.

Evidently, it can be prohibitively onerous for the Commission to produce such an exaggerated amount of evidence. To gain a better sense of the actual

[115] M P Schinkel and J Tuinstra, 'Imperfect Competition Law Enforcement', International Journal of Industrial Organization, v24 no6 2006 1267-1297.

magnitude of the task bear in mind that a great deal of the extraordinarily complex discussion of preexisting collective dominance in the *Sony/BMG* case focused on barely a single condition of the *Airtours* criterion: whether or not the market was insufficiently transparent for tacit collusion to occur.[116] It is then difficult to even imagine the tremendous machinery of investigation, evidence-gathering and risk-taking that the Commission will have to put in motion in order to establish positively the ECD test in Article 82. And this is not all. On top of this burden, the Commission faces the additional task of satisfying a test of abusive conduct and of overcoming the limitations associated to the available means of proof: the quality and scope of data, the methodology, the adequacy of data analysis (inferences from evidence) and the high risk of contestability of economic evidence in a legal process, among others.

Even when restricting the analysis to those very exceptional cases in which abusive conduct could be feasible in tacit collusion, the need for such a heavy evidentiary effort on the part of the Commission can make the enforcement of Article 82 in tacit collusion complex, time-consuming, expensive, unwarranted and hence highly unlikely.[117]

## 6. Conclusion

In this article I have argued that the Commission is likely to face two key challenges when using Article 82 to tackle tacit collusion. The first challenge is to distinguish tacit collusion from unconscious parallel conduct. The second one consists of detecting whether the lack of, rather than hidden, communication between firms underlies the allegedly abusive conduct. The problem for the Commission is that the current legal tools in EC competition law cannot help meeting these challenges without generating a worrisome dose of error. In order to mitigate this error and improve the ECD test's performance, the Commission – which bears the burden of proof – will have to

[116] *Impala* (n 13) paras 45-48, 287-89, 321-5, 366 and 459; *Sony/BMG* (n 2) paras 113, 125-26, 129-31.
[117] For a dissenting view, Petit (n 1) 547-57.

produce more cogent evidence to the extent of making enforcement far too onerous. Given the high costs to which the Commission may expose itself by investigating cases of tacit collusion in Article 82, the justification for enforcement is not apparent. With a policy of enforcing Article 82 being impracticable, this article ultimately claims that the Commission can only address concerns of tacit collusion *ex ante*. Further research may look at to what extent commitment decisions under Article 9(1) of Regulation 1/2003 could allow the Commission to combat tacit collusion this way.