# THE "OLIGOPOLY PROBLEM" IN EU COMPETITION LAW

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## I. Introduction

An oligopoly is a market with a few sellers.[1] In today's world, oligopolies crowd most sectors of the economy. With the exception of certain public goods subject to monopolies (*e.g.*, defense) and of textbook-only perfect competition markets (*e.g.*, street food in South-East Asia), oligopolies can be observed all over the value chain, from the wholesale level (*e.g.*, tire manufacturing) to retail activities (*e.g.*, grocery retailing), in commoditized industries (*e.g.*, steel), services (*e.g.*, credit rating) as well as branded goods (*e.g.*, alcoholic beverages) in small, local markets (*e.g.*, retail oil distribution) as well as large ones (*e.g.*, consumer electronics markets). Moreover, oligopolies are multifaceted. They involve firms of all sorts, from labor-intensive ones (*e.g.*, mail delivery operators) to capital-intensive players (*e.g.*, pharmaceutical companies, banking sector), from vertically integrated (*e.g.*, movie production and distribution) to non-vertically integrated ones (*e.g.*, athletic sportswear). In brief, oligopolies are ubiquitous.

The factors which engendered oligopolies are well-known in economic history. Since the industrial revolution in the XIXth century, technical progress (in transport, energy and information technologies), market-opening reforms (including sectoral and trade liberalization policies), and the accumulation of capital with the expansion of finance have spurred competition on product markets. With this, inefficient atomistic firms have disappeared, and markets have undergone increased concentration. On the other hand, markets subject to monopoly rents and bottlenecks (*e.g.*, network industries, etc.) have been increasingly challenged by competitive entrants.

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[1] Conversely, an oligopsony is a market structure with a few buyers. Economists have been reluctant to set a number under which a market can be considered an oligopoly. According to the well-known expression coined by Selten, "four are few and six are many". *See* R. Selten, "A Simple Model of Imperfect Competition, Where Four Are Few and Six Are Many", (1973) 2 *International Journal of Game Theory*, 141. Other concepts have also mushroomed in the economic literature to qualify oligopolies (*e.g.*, "*bilateral oligopoly*", "*tight*" oligopoly, etc.).

From an industrial organization ("IO") perspective, the proliferation of oligopolistic market structures is not, as such, a cause for concern. However, since the early XXth century, antitrust economists suspect the conduct of oligopolists to give rise to a specific "*market failure*". Under certain conditions, oligopolists can coordinate their prices (and/or any other variable) and jointly achieve supra-competitive profits, without however entering into any institutional arrangement (a contract, a combination, an agreement, a joint-venture, a trade association, etc.). In terms of effects, the market works as if there were collusion. In terms of forms (or process), however, there is no such thing as collusion on the market. Hence the well-known oxymoron "*tacit collusion*".

This finding that collusion can arise absent a formal arrangement has puzzled generations of scholars. Over the past decades, economists have grappled with tacit collusion, seeking to better circumscribe its scope and features. Likewise, lawyers have spent countless hours trying to craft an appropriate remedy for tacit collusion, in particular on the basis of existing antitrust rules. Today, academic libraries are replete with books, journals and articles on this so-called "*oligopoly problem*".[2] And each year many new studies abound.

The persistence of research in this issue is perhaps the best proof that there is an unsettled problem with oligopoly, which is yet to be addressed properly. All in all, and possibly with the risk of adding just another brick in the wall, the present paper purports to bring some solutions to this problem, both from a legal and economic perspective. To this end, it is divided in five parts. Part I gives an overview of the economic literature devoted to the oligopoly problem (II). Part II draws a number of policy lessons from the economic literature, which should be kept in mind when devising remedies for tacit collusion (III). Part III describes the various remedies available, and those applied, to the oligopoly problem under European Union ("EU") competition law (IV). Part IV criticizes the current merger-based treatment of tacit collusion, and the outstanding uncertainties in other areas of the law (V). Part V suggests to rehabilitate the *ex post* instruments enshrined in Article 101 and 102 of the Treaty on the Functioning of the EU ("TFEU") (VI). Part VI provides a conclusion (VII).

[2] We believe the expression was used for the first time in R. Posner, "Oligopoly and the Antitrust Laws: A Suggested Approach", (1969) 21 *Stanford Law Review*, 1562.

## II. Overview of the Oligopoly Problem in the Economic Literature

The oligopoly problem takes its source in the deficiencies of neo-classical economic theory. The polar models of monopoly and perfect competition indeed do not say *how*, and *at what level*, prices and quantities are set in oligopolies.[3]

Those two subsets of problems – *i.e.*, a process problem and an outcome problem – attracted early scholarly interest. In the next sections, we walk the reader through the history of tacit collusion economics (A), and provide a short epistemological overview of the theory (B).

### *A. Brief History of the Economics of Tacit Collusion*

In the late XIXth and early XXth century, scholars made a first attempt at filling the oligopoly gap in economic theory.[4] They designed mathematical models which stylized the process and outcome of competition on oligopolistic markets.[5] Cournot, in 1838, came up with a first result, finding that the equilibrium price in oligopolies is above marginal costs.[6] In 1883, Bertrand reached a distinct result, predicting that in equilibrium, price equalize marginal costs. In 1925, Edgeworth invalidated both models. He showed that oligopoly prices were essentially indeterminate, oscillating between small and high levels (the so-called "*Edgeworth cycles*").[7] Finally, in 1934, Von Stackelberg found the equilibrium price to be superior to marginal costs, but below the Cournot equilibrium.[8]

Given their inconsistent results, none of those models was of any help for the purposes of ranking general prescriptions on oligopolies. Moreover, all were based on distinct restrictive assumptions, remote from the reality of daily markets. Despite all their flaws, however, those models enshrined a key, fundamental finding. Unlike monopolists or atomistic firms, rival oligopolists must and do take account of each other's best reactions when devising

[3] This is actually the core of the oligopoly problem according to economists. As will be seen below, lawyers primarily perceive the oligopoly problem as a remedial issue. *See* X. Vives, *Oligopoly Pricing – Old Ideas and New Tools*, The MIT Press, 2001.

[4] A.-A. Cournot, *Recherches sur les principes mathématiques de la théorie des richesses,* Dunod, Paris, 2001 ; J. Bertrand, "Théorie des richesses: revue de 'Théories mathématiques de la richesse sociale' by L. Walras and 'Recherches sur les principes mathématiques de la théorie des richesses' par A. Cournot", (1883) *Journal des Savants* ; F. Y. Edgeworth, "The Pure Theory of Monopoly" in *Papers relating to political economy*, Vol. I, Burt Franklin, New York, 1925, pp.111-142 ; H. Von Stackelberg, *Marktform und gleichgewicht*, Julius Springer, Vienna, 1934, reprinted in *The Theory of the Market Economy*, Translation A. T. Peacock, William Hodge, London, 1952.

[5] To this end, they relied on mathematics - possibly pioneering the use of mathematics in economics. *See* X. Vives, "Cournot and the Oligopoly Problem", (1989) 33 *European Economic Review*, pp.503-514.

[6] We refer here, to a Nash equilibrium, where each oligopolist makes the best response to its rivals' actions.

[7] F-Y. Edgeworth, op. cit., *supra*, note 4.

[8] H. Von Stackelberg, op. cit., *supra*, note 4.

commercial decisions. This central idea that oligopolists are "*interdependent*" will steer subsequent economic research in new, promising directions.

The next breakthrough in oligopoly theory arose in 1929. In a seminal paper, Chamberlin found that the interaction of two completely independent sellers may give rise to a complete absence of price competition, without however any sort of "*actual, or tacit agreement*".[9] Chamberlin's own words are self-explanatory:

> "*If each [oligopolist] seeks his maximum profit rationally and intelligently, he will realize that when there are only two or a few sellers, his own move has a considerable effect upon his competitors, and that this makes it idle to suppose that they will accept without retaliation the losses he forces upon them. Since the result of a cut by anyone is inevitably to decrease his own profits, no one will cut, and, although the sellers are entirely independent, the equilibrium result is the same as tho there were a* monopolistic agreement *between them* (emphasis added)".[10]

And,

> "*The prices of all move together, and from this it follows at once that the equilibrium price will be the monopoly one*".[11]

With this, Chamberlin brought a novel explanation to the oligopoly problem, and its two subsets of problems. First, if oligopolists have regard to their "*total influence*" upon price – *i.e.*, they consider the effects of their policy upon rivals – a *process* of conscious parallelism arises.[12] Second, the outcome of conscious parallelism is to drive prices up to the *level* of a "*monopolistic agreement*". This twin dynamic is what economists have since then labeled "*tacit collusion*" (or "*non-cooperative collusion*") for it has many similarities with the dynamics of collusion.

Chamberlin's demonstration was intuitively appealing. Nevertheless, as he himself acknowledged, his demonstration was fraught with many elements of "*uncertainty*".[13] This is

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[9] E. H. Chamberlin, "Duopoly: Value Where Sellers Are Few", (1929) 44 *Quarterly Journal of Economics*, 63, p.65.
[10] *Idem* p.85.
[11] *Id*. p.89.
[12] *Id*. Chamberlin explains this dynamic by the concept of "*total influence*" (p.66) where the oligopolist contemplating a price cut does not assess "*only the direct influence which he has upon the price*", but "*the effects of his policy upon his rivals (and hence upon himself again)*" (p.66).
[13] *Id*. pp.87 and following stressing that the number at which the "*total influence*" ceased to be relevant was unclear (p.86). In addition, Chamberlin indicates that oligopolists do not necessarily share the same degree of intelligence and far-sightedness. This may lead to downward pricing moves (p.88). Moreover, asymmetries amongst firms might influence the probability of tacit collusion (a price cut by a small firm will have a negligible effect on others and thus will not be followed (p.89)). Finally, Chamberlin's demonstration is predicated on the assumption of "*instantaneous reaction*" (p.89) and of immediate re-contracting (p.89-90). If this assumption is not true, frictions will make a price cut profitable during a certain period of time.

particularly true of the conditions under which tacit collusion can unfold, which remained wholly unclear in his paper.

In the following years, scholars attempted to nail down the conditions that trigger tacit collusion. A first string of studies focused on the relationship between the number of sellers and prices.[14] Inaugurated by Mason in 1933, this line of research received a major impetus in the 1960s with the emergence of the Harvard School.[15] Bain, followed by Kaysen and Turner, gathered a huge amount of empirical data and found a link between oligopolistic market concentration and supra-competitive profits (the "*SCP paradigm*").[16] In their view, if oligopolies achieve supra-competitive profits it is because, like monopolies, they enjoy an "*unreasonable*" degree of market power. For Harvard scholars, oligopolies are thus just as bad as monopolies, as evidenced by the propagation of expressions such as "*group monopoly power*" or a "*shared monopoly*". [17] This structural view of oligopolies led Harvard scholars to support the application of Section 2 of the Sherman Act to oligopolies,[18] or even to order the breaking up of tight oligopolies through dedicated statutes.[19]

A second string of studies challenged the Harvard School view that tacit collusion was a matter of market structure. Chicago School experts argued that oligopolistic market structures often yielded efficiencies. In their view, Harvard scholars had succumbed to a daft economic error, that of conflating correlation and causation by failing to envision the alternative explanation that oligopolists achieve profits thanks to superior efficiency. In turn, scholars like Stigler demonstrated that collusion can only arise in the presence of demanding conditions – *i.e.* oligopolists must be able to monitor and police adherence to a pre-defined

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[14] *Id*. p.89. Chamberlin hinted that there was probably a magic number where the sellers' "*total influence*", and thus tacit collusion, ceased to be relevant.

[15] E. S. Mason, "Price and Production Policies of Large-Scale Enterprise", (1939) 29(1) *American Economic Review*.

[16] J. S. Bain, *Industrial Organization*, 2nd ed., John Wiley & Sons, New York, 1968; C. Kaysen C. and D.F. Turner, *Antitrust Policy*, Harvard University Press, Cambridge, 1959.

[17] Interestingly, Harvard Scholars did not frame the debate in collusion or interdependence terms, and thus disregarded the process sub-problem. Harvard's scholars structural perception of oligopolies, which unraveled in proposals to apply structural divestiture remedies through Section II of the Sherman Act, or *sui generis* deconcentration pieces of legislation, were eventually dealt a blow at the Airlie House conference of 1974. Y. Brozen, "The Antitrust Task Force Deconcentration Recommendation", (1970) 13 *Journal of Law and Economics*, 279.

[18] J. A. Rahl, "Conspiracy and the Anti-Trust Laws", (1950) 44 *Illinois Law Review*, 743.

[19] C. Kaysen and D. F. Turner, *Antitrust Policy*, op. cit., *supra* note 16, pp.266-267; White House Task Force on Antitrust Policy, Report 1 (in Trade Reg., supp. to no.415, may 26, 1969), reprinted in (1968-1969) R.A. Winter, *Antitrust Law and Economics Review*, 11; P. A. Hart, "Restructuring the Oligopoly Sector: The Case for a New 'Industrial Reorganization Act'", (1972) 4 *Antitrust Law & Economics Review*, 35. For early responses to the emerging work of Harvard scholars, *see* J. F. Brodley, "Oligopoly Power Under the Sherman and Clayton Acts – From Economic Theory to Legal Policy", (1967) 19 Stanford Law Review, 285; L. B. Schwartz, "New Approaches to the Control of Oligopoly", (1960) 109(1) *University of Pennsylvania Law Review*, pp. 31-53.

collusive agreement –[20] thus throwing suspicion on the plausibility of purely tacit "*Chamberlinian*" collusion. The Chicago school has, however, remained divided over tacit collusion. Posner, for instance, expressed faith in the existence of pure tacit collusion. He conceded though that those situations were rare and that often oligopolists would have to formally conspire to maximize joint profits.[21] Posner elaborated a checklist of factors necessary for the emergence of tacit collusion (market concentration, inelastic demand, barriers to entry, standard product, costs similarity, etc.).[22] In subsequent years, Posner's checklist was heavily criticized as inconclusive.[23]

In the 1970s, advances in game theory opened new perspectives for research on oligopolies. Non-cooperative game theory showed that formally Chamberlin's intuition was right.[24] The demonstration is based on a classic prisoner's dilemma: two suspects who cannot communicate end-up denouncing each other, even if they would both be better-off staying silent. The transposition of this model to oligopolies suggests that independent firms will choose to compete, rather than collude. However, this only holds true in so-called "*one shot*" games. In markets where firms meet repeatedly, and for an infinite amount of times, collusion becomes likely.[25] With the recurrence of interactions, oligopolists can indeed subtly communicate, for instance by sending each other signals of a commitment to cooperate (one firm may persistently maintain high prices). Moreover, the repetition of market interactions increases the "*discount factor*" of oligopolists, and brings it close to unity.[26] In concrete words, the long-term profits achieved with collusion exceed the short-term profits achieved

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[20] G. J. Stigler, "Theory of Oligopoly", (1964) 72 *Journal of Political Economy*, 44. Interestingly, Stigler changed his mind over time. He had indeed previously sided with Harvard scholars and written in crude words that: *"An industry which does not have a competitive structure will not have competitive behavior"*. *See* G. J. Stigler, "The Case Against Big Business," *Fortune*, May 1952.

[21] R. Posner, "Oligopoly and the Antitrust Laws: A Suggested Approach", *op. cit.* , *supra* note 2, p.1575.

[22] *Idem.* This list was expanded in R. Posner, *Antitrust Law: an Economic Perspective*, University of Chicago Press, Chicago, 1976. Posner treats explicit and tacit collusion under the same analytical roof, and argues that oligopolistic collusion could appear (and thus be detected and punished) when an *undefined* range of economic characteristics are met.

[23] F. M. Scherer, "The Posnerian Harvest: Separating Wheat from Chaff", (1977) 86(5) *Yale Law Journal*, 974; R. S. Markovits, "Oligopolistic Pricing Suits, the Sherman Act and Economics Welfare: Part III. Proving (Illegal) Oligopolistic Pricing: A Description of the Necessary Evidence and a Critique of the Received Wisdom about Its Character and Cost", (1975) 27(2) *Stanford Law Review*, 307.

[24] This is different from cooperative game theory, which studies games where players can cooperate. This branch of game theory thus cannot apply to tacit collusion.

[25] The outcome of the game is called a Nash equilibrium. J.W. Friedman, "A non-cooperative equilibrium for supergames", (1971) 38 *Review of Economic Studies*, pp.1-12. In repeated, but finite games, there is no cooperation in the last period, and with backward induction, oligopolists may actually never cooperate.

[26] *Idem.*

with competition.[27] Finally, in a repeated game, any oligopolist that decides to cheat faces risks of retaliation in subsequent periods, and may thus be driven out of business.

The new insights of game theory triggered a flood of research on tacit collusion.[28] Soon, studies showed that the non-cooperative equilibrium of game theory could only arise and endure under four cumulative conditions. First, oligopolists must share a *common understanding* of the price at which collusion should unveil (condition 1, or "C1"), otherwise they will keep raising price at different levels, and there will be competition in the market.[29] Second, there must be a "*credible threat of retaliation*" against rival cheaters, to discourage any temptation to deviate (condition 2, or "C2").[30] Third, oligopolists must be able to *monitor* each other's prices so as to "*detect*" any competitive deviation (condition 3, or "C3").[31] Fourth, the sustainability of tacitly collusive prices is conditioned on the oligopolists' ability to "*discourage production by external firms*", in other words, entry (condition 4, or "C4").[32]

With those clarifications, game theory solved the process component of the oligopoly problem. From this point onwards, the scholarship on tacit collusion will shift from basic to applied research, presumably with the purpose of assisting regulators. A first string of studies seeks to assess if "*market structure*" in the economic sense has an influence on tacit collusion and in particular on C1, C2, C3 and/or C4.[33] This copious literature has been rightly

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[27] Thus, in a repeated game, each oligopolist must compare the profits achieved with short term competition and long term tacit collusion. This trade-off is of critical importance. *See* K. Bagwell and A. Wolinsky, "Game Theory and Industrial Organization", *Discussion Paper* #0102-36, Department of Economics, Columbia University, 3 April 2000, p.24. In contrast, in a finite, one-shot interaction (for instance, on some public procurements markets), oligopolists will have incentives to compete. *See* S. Feuerstein, "Collusion in Industrial Economics – A Survey", (2005) 5(3) *Journal of Industry, Competition and Trade,* 163-198, p.167.

[28] As noted by Professor P. Rey, although this field of research mentions collusion in general, it "*focuses mainly on tacit collusion, which, in contrast to typical unlawful cartels, lacks explicit coordination mechanisms or information exchanges*". *See* P. Rey, "On the Use of Economic Analysis in Cartel Detection", in C-D. Ehlermann, I. Atanasiu and N. Calvino (eds.) *European Competition Law Annual - Enforcement of Prohibition of Cartels*, Hart Publishing, 2007, p.2.

[29] Oligopoly theory teaches that there are many price equilibrium above costs. *See* D. A. Yao and S. S. Desanti, "Game Theory and the legal Analysis of Tacit Collusion", (1993) *The Antitrust Bulletin*, 113; J. Tirole, *The Theory of Industrial Organization*, The MIT Press, Cambridge, Massachusetts, 1988, p.247 talks of an "*embarrassment of riches*" in choosing the equilibrium price.

[30] D. K. Osborne, "Cartel Problems", (1976) 66(5) *American Economic Review*, 835, p.838 (including when this entails individual losses absent an agreed upon loss-sharing mechanism). *See* also D. Orr and P. W. McAvoy, "Price Strategies to Promote Cartel Stability", (1965) 32 *Economica*, 186-197 on the variety of available punishment strategies.

[31] G. Stigler, op. cit., *supra* note 20, p.46. Detection must be possible absent the information exchange mechanisms conventionally found in explicit cartels/collusion.

[32] D. K. Osborne, op. cit., *supra* note 30, p.843.

[33] The famous textbook of Scherer and Ross also brings a good illustration of this approach. *See* F.M. Scherer and D. Ross, *Industrial Market Structure and Economic Performance*, 3rd ed., Houghton Mifflin Company, Boston, 1990. For a more recent review, *see* S. Stroux, *US and EC Oligopoly Control*, Kluwer Law International, The Hague, 2004. In conventional economics, market structure can be defined as the organisational and other features of an industry sector.

described by the European Commission's Chief Economist as a "*jungle*".[34] It draws on a variety of methodologies, from formal (abstract) reasoning to empirical methods and, more recently, to experimental techniques.[35] Moreover, the literature goes in all directions. Initially, many studies focused on endogenous market features, such as market concentration,[36] firms' symmetry/asymmetry,[37] barriers to entry,[38] capacity constraints/excess capacity,[39] multimarket contacts,[40] demand evolution,[41] price transparency,[42] product homogeneity/differentiation,[43] characteristics of market transactions,[44] rate of innovation,[45] etc. But a large, and growing, number of articles studies *exogenous* market features, such as English and Most Favoured Customers ("MFC") clauses,[46] headline price announcements,[47] information exchange agreements,[48] cross shareholdings,[49] price leadership,[50] joint ventures,[51]

[34] K-U Kühn, "An Economists' Guide through the Joint Dominance Jungle", Paper #02-014, John M. Olin Center for Law & Economics – University of Michigan; M. Stenborg, "Forest for the Trees: Economics of Joint Dominance", (2004) 18(3) *European Journal of Law and Economics*, p. 365 (talking of a "*forest for the trees*"). No wonder why, in recent years, many publications have proposed surveys of the economic literature on this issue. *See*, for instance, M. Ivaldi, B. Jullien, P. Rey, P. Seabright and J. Tirole, *The Economics of Tacit Collusion*, Final Report for DG Competition, European Commission, March 2003; Study on Assessment Criteria for Distinguishing between Competitive and Dominant Oligopolies in Merger Control, Report for the European Commission, DG Enterprise, May 2001, Europe Economics.

[35] M. Stenborg, op. cit., *supra* note 34, pp.377-379.

[36] R. Selten, op. cit, *supra* note 1.

[37] O. Compte, F. Jenny and P. Rey "Capacity Constraints, Mergers and Collusion", (2002) 46(1) *European Economic Review*, 1-29.

[38] M. Ivaldi *et al*. op. cit., *supra* note 34, pp.16-19.

[39] W. A Brock and J. A. Scheinkman, , "Price Setting Supergames with Capacity Constraints" (1985) 52(3) *Review of Economic Studies*, 371-82.

[40] B. D. Bernheim and M. D. Whinston, "Multimarket Contact and Collusive Behavior", (1990) 21 *RAND Journal of Economics*, 1; W. N. Evans and I. N. Kessides, "Living by the Golden Rule: Multi-Market Conduct in the U.S. Airline Industry", (1995) 109(2) *Quarterly Journal of Economics*, 341; P. M. Parker and L-H. Röller, "Collusive Conduct in Duopolies: Multi-Market Contact and Cross-Ownership in the Mobile Telephone Industry", (1997) 28 *RAND Journal of Economics*, 304; M. R. Busse, "Multimarket Contact and Price Coordination in the Cellular Telephony Industry", (2000) 9(3) *Journal of Economics and Management Strategy*, 287.

[41] J. Haltiwanger and J. E. Harrington Jr., "The Impact of Cyclical Demand Movements on Collusive Behavior", (1991) 22(1) *RAND Journal of Economics*, 89.

[42] C. Schultz, "Transparency on the Consumer Side and Tacit Collusion", (2005) 49(2) *European Economic Review*, 279–297.

[43] T.W. Ross, "Cartel stability and product differentiation", (1992) 10(1) *International Journal of Industrial Organization*, 1.

[44] P. Klemperer, "What Really Matters in Auction Design", (2002) 16 *Journal of Economic Perspectives*, 169-189; A. Blume and P. Heidhues, "Tacit Collusion in Repeated Auctions", University of Pittsburgh, 2001, mimeo. More generally, see M. Ivaldi *et al*. op. cit., *supra* note 34, p.14 (on frequency of interactions).

[45] M. Ivaldi *et al*. op. cit., *supra* note 34, p.35 ; F. M. Scherer and D. Ross, op. cit., *supra* note 33, p.285.

[46] S. C. Salop, "Practices that (Credibly) Facilitate Oligopoly Coordination", in J. E. Stiglitz and G. F. Mathewson (eds), *New Development in the Analysis of Market Structure*, MIT Press, Cambridge, 1986.

[47] A. Holt and D. T. Scheffman, "Facilitating Practices: The Effects of Advance Notice and Best-Price Policies", (1987) 18(2) *RAND Journal of Economics*, 187; T.E. Cooper, "Most Favored Customer Pricing and Tacit Collusion", (1986) 17 *RAND Journal of Economics*, 377.

[48] K-U. Kühn and X. Vives, *Information Exchange among Firms and their Impact on Competition*, Office for Official Publications of the European Community, Luxemburg, 1995.

resale price maintenance,[52] standard-form contracts,[53] binding price regulations and other statutory obligations,[54] state subsidies,[55] taxation principles,[56] anti-dumping regimes,[57] etc. On each of those features, the literature is far from unanimous. Whilst some studies ascribe to certain market features a facilitating effect on tacit collusion – so-called "*plus factors*" – others point out to an undermining effect – so-called "*minus factors*".

A second area that has garnered contemporary research interest is empirical analysis.[58] Scholars have attempted to verify the presence of tacit collusion in real-life markets, on the basis of direct industry data. It would be beyond the scope of this study to provide a full account of this literature. Suffice to say that those studies span a wide array of economic sectors such as car manufacturing,[59] airlines,[60] breweries,[61] petrol distribution,[62] long-distance telephony markets,[63] credit cards,[64] the NASDAQ multiple dealer market,[65] etc.

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[49] D. Malueg, "Collusive behavior and partial ownership of rivals", (1992) 10 *International Journal of Industrial Organization*, 27; D. Gilo, Y. Moshe and Y. Spiegel, "Partial cross ownership and tacit collusion", (2006) 37 *RAND Journal of Economics*, 81.

[50] J. W. Markham, "The Nature and Significance of Price leadership", (1951) 41(5) *American Economic Review*, 891.

[51] On joint ventures in general, *see* L. Neubecker, "Does cooperation in manufacturing foster tacit collusion?" Tübinger Diskussionsbeiträge 261, University of Tübingen, School of Business and Economics, 2003 ; J. E. Kwoka Jr., "The Output and Profit Effects of Horizontal Joint Ventures", (1992) 40(3) *Journal of Industrial Economics*, 325; C. Shapiro and R. D. Willig, "On the Antitrust Treatment of Production Joint Ventures", (1990) 4(3) *Journal of Economic Perspectives*, 113; Z. Chen and T. W. Ross, "Cooperating upstream while competing downstream: a theory of input joint ventures", (2003) 21(3) *International Journal of Industrial Organization*, 381; T. F. Bresnahan and S. C. Salop "Quantifying the competitive effects of production joint ventures" (1986) 4(2) *International Journal of Industrial Organization*, 155. A significant number of studies has been devoted to R&D joint ventures. *See* S. Martin, "R&D Joint Ventures and Tacit Product Market Collusion", (1995) 11(4) *European Journal of Political Economy*, 733; M.L. Katz and J. A. Ordover, "R&D Cooperation and competition", (1990) *Brookings Papers on Economic Activity*, 137-203; M. I. Kamien, E. Muller and I. Zang, "Research Joint Ventures and R&D Cartels", (1992) 82(5) *American Economic Review*, 1293; W. J. Baumol, "Horizontal Collusion and Innovation", (1992) 102 *Economic Journal*, 129; T. Duso, L-H Röller and J. Seldeslachts, "Collusion through Joint R&D: An Empirical Assessment", Tinbergen Institute Discussion Paper 10-112/1, November 8, 2010.

[52] B. Jullien and P. Rey, "Resale Price Maintenance and Collusion", (2007) 38(4) *RAND Journal of Economics*, 983; P. Rey and T. Vergé, "Resale Price Maintenance and Horizontal Cartel", CMPO Working Paper Series, n°02.047, July 2004.

[53] D. Gilo and A. Porat, "The Hidden Roles of Boilerplate and Standard Form Contracts: Strategic Imposition of Transaction Costs, Segmentation of Consumers and Anticompetitive Effects" (2006) 104 *Michigan Law Review*, 983.

[54] S. Albæk, H.P. Møllgaard and P.B. Overgaard, "Law-Assisted Collusion? The Transparency Principle in the Danish Competition Act", (1996) 17 *European Competition Law Review*, 339.

[55] C. Bertsch, C. Calcagno and M. Le Quement, "State aid and tacit collusion", Economics Working Papers ECO2009/36, European University Institute, 2009, mimeo.

[56] G. Torsvik, "Profit taxation in an industry with tacit collusion" (1994) *Finanz Archiv*, 51; A. Haufler and G. Schjelderup, "Tacit Collusion under Destination- and Origin-Based Commodity Taxation", CESifo Working Paper Series 283, CESifo Group Munich, 2000.

[57] R. J. Pierce, "Antidumping Law and Cartelization", (2000) 67 *Antitrust Law Journal*, 725.

[58] For a good review, *see* T.F. Bresnahan "Empirical Studies with Market Power," *Handbook of Industrial Organization*, vol. II, chap. 17 (1989). *See* also M. Stenborg, *op. cit.*, *supra* note 34, p.379 and following.

[59] T. F. Bresnahan, "Competition and Collusion in the American Automobile Oligopoly: The 1955 Price War" (1987) 35 *Journal of Industrial Economics*, 457-482.

A third strand of the modern economic literature explores the existence of other forms of tacit collusion, beyond the standard model of price/quantity coordination (*e.g.*, on product/service quality, territorial areas, etc.). Those studies show for instance that oligopolists can coordinate investments in production capacity,[66] R&D expenditures,[67] the release date of product/services,[68] compensation schemes for business executives,[69] licensing policies for intellectual property rights ("IPR"),[70] access charges on communications networks,[71] etc. A proximate, albeit distinct, field of research focuses on "*semicollusion*".[72] In such situations, tacitly colluding firms coordinate on one parameter (*e.g.*, price) and compete on others (*e.g.*, capacity, R&D, etc.). Economists remain divided as to which of those effects is more dominant than the other (collusion v. competition). After all, if colluding oligopolists compete fiercely on all parameters but the collusive one, then tacit collusion may not be a

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[60] W. N. Evans and I. N. Kessides, "'Living by the 'Golden Rule', Multimarket Contact in the U.S. Airline Industry", (1994) 109(2) *The Quarterly Journal of Economics*, 341-366.

[61] M.E. Slade, "Interfirm Rivalry in a Repeated Game: An Empirical Test of Tacit Collusion", (1987) 35 *Journal of Industrial Economics*, 499-551.

[62] M. S. Lewis, "Price Leadership and Coordination in Retail Gasoline Markets with Price Cycles", (2011) *International Journal of Industrial Organization*, forthcoming ; M. S. Lewis, "Odd Prices at Retail Gasoline Stations: Focal Point Pricing and Tacit Collusion", 20 March 2011, mimeo.

[63] P. W. MacAvoy, "Tacit Collusion Under regulation in the Pricing of Interstate Long-Distance Telephone Services", (1995) 4(2) *Journal of Economics & Management Strategy*, 147-185.

[64]"C. Knittel and V. Stango, "Price Ceilings, Focal Points, and Tacit Collusion: Evidence from Credit Cards", (2003) 93(5) *American Economic Review*, 1703.

[65] W. G. Christie, J.H. Harris and P.H Schultz, "Why did NASDAQ Market Makers Stop Avoiding Odd-Eighth Quotes?", (1994) 49(5) *Journal of Finance*, 1841-1860; Y. Simaan, D. Weaver, and D. Whitcomb, "Market Maker Quotation Behavior and Pre Trade Transparency". (2003) 58(3) *Journal of Finance*, 1247.

[66] R.J. Gilbert and M. Lieberman, "Investment and coordination in oligopolistic industries", (1987) 18(1) *RAND Journal of Economics*, 17-33.

[67] J. Weyant and T. Yao, "Strategic R&D Investment under Uncertainty in Information Technology: Tacit Collusion and Information Time Lag", February 2005, mimeo.

[68] A. Amelio and S. Biancini, "Alternating Monopoly and Tacit Collusion", 1 December 2005, mimeo.

[69] P. de Lamirande, JD. Guiguou and B. Lovat, "Relative Performance evaluation and tacit collusion", (2008) 8(2) *Review of Business Research*, 103.

[70] A. Fosfuri, "The Licensing Dilemma: understanding the Determinants of the Rate of Licensing", (2006) 27(12) *Strategic Management Journal*, 1141-58.

[71] M. Armstrong, "The Theory of Access Pricing and Interconnection", *Handbook of Telecommunications Economics*, vol. I, 2002, showing that access charges can be used as a "*raise each other's costs*" mechanism. *See* T. M.Valletti, "The theory of access pricing and its linkage with investment incentives", (2003) 27(10-11) *Telecommunications Policy*, 659.

[72] C. Fershtman and A. Pakes "A Dynamic Game with Collusion and Price Wars", (2000) 31(2) *RAND Journal of Economics*, 207-236; N. De Roos, "A Model of Collusion Timing", (2004) 22(3) *International Journal of Industrial Organization*, 351. For older research, *see* H. Brander and R. Harris, "Anticipated Collusion and Excess Capacity", University of British Columbia, 1984, mimeo; C. Davidson and R. Deneckere, "Excess Capacity and Collusion", (1990) 31(3) *International Economic Review*, 3521-3541 ; F. Steen and L. Sorgard, "Semicollusion in the Norwegian cement market", (1999) 43(9) *European Economic Review*, 1775.

cause of serious concern.[73] Yet, it may be argued that oligopolists that have achieved collusion on one parameter are better placed to collude on other parameters.[74]

Finally, as in other areas of antitrust economics, behavioralists have shed new light on tacit collusion.[75] In contrast to standard IO theory, behavioral economics does not focus on the firm, but on individuals. In essence, it posits that individuals within firms do not always behave rationally. This is because individuals are subject to a number of physiological, cognitive and psychological limitations, biases and quirks. Hence, individuals cannot – and do not – collect, process and analyze all the relevant information necessary to make welfare-optimizing decisions.[76] In so far as tacit collusion is concerned, this implies that oligopolists may tacitly collude, in settings where standard IO analysis would predict a competitive outcome. For instance, a CEO may renege on a profitable price cutting strategy, simply because he is reluctant to attract a reputation of being a cheater, or out of "*mutual respect and affectionate regard*" for his rivals' leaders.[77] Similarly, risk-averse oligopolists may over-estimate the costs of rivals' retaliation and stick irrationally to the tacitly collusive equilibrium.

### *B. Epistemological Overview of the Economics of Tacit Collusion*

Now that we have reviewed the economic literature,[78] a number of epistemological clarifications can be made. In IO theory, the oligopoly problem forms part of general

[73] M. Stenborg, op. cit., *supra* note 34, pp.375 and following.

[74] For an experimental demonstration in relation to pricing and advertising, *see* A. Nicklisch, "Semi-collusive advertising and pricing in experimental duopolies", *Working Paper Series of the Max Planck Institute for Research on Collective Goods*, 2008, mimeo.

[75] A number of "mainstream" books have popularized behavioral economics in recent years. *See* J. Fox, *The Myth Of The Rational Market: A History Of Risk, Reward, And Delusion On Wall Street*, Harper Business, New York, 2009 ; G. Akerlof and R. Shiller, *Animal Spirits: How Human Psychology Drives The Economy, And Why It Matters For Global Capitalism*, Princeton University Press, Princeton, 2009 ; D. Ariely, *Predictably Irrational: The Hidden Forces That Shape Our Decisions*, HarperCollins, New York, 2008; R. Thaler and C. Sunstein, *Nudge: Improving Decisions About Health, Wealth, And Happiness*, Yale University Press, New Haven, 2008.

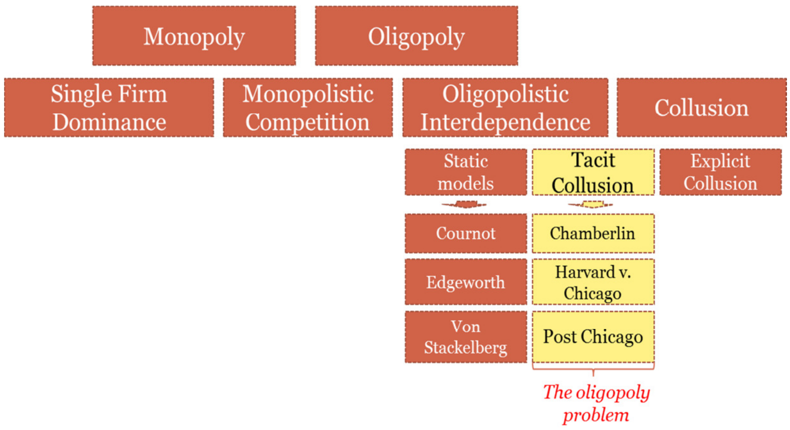
[76] Individuals exhibit features such as "*bounded rationality*", "*bounded willpower*", and "*bounded self-interest*". The first of these terms refers to the fact that people have "*cognitive quirks that prevent them from processing information rationally*"; the second that they exhibit weakness of will; and the last refers to the fact that people "*sometimes act out of motives that do not seem explicable by self-interest*". R. Posner, "Rational Choice, Behavioral Economics, and the Law", (1998) 50(5) *Stanford Law Review*, 1551; M. Stucke, "Money, Is That What I Want?: Competition Policy and the Role of Behavioral Economics, (2010) 50 *Santa Clara Law Review*, 101.

[77] Scherer and Ross, *op. cit*., *supra* note 33, pp.235-236.

[78] Our literature review is limited to mainstream economic research. We do not review other approaches, for instance those applying institutional economics to tacit collusion. For an example, *see* M. Vatiero, "An Institutionalist Explanation of Market Dominances" (2009) 32(2) *World Competition*, 221.

oligopoly theory.[79] At a higher level of granularity within oligopoly theory, the oligopoly problem belongs to the theory of collusion and, in particular, to the theory of non-cooperative collusion (or tacit collusion). It is distinct from the theory of cooperative collusion (or explicit collusion) which focuses on the conduct of oligopolists that coordinate through formal agreements.

Importantly, the oligopoly problem has little to do with the literature on Cournot and Bertrand competition.[80] Those models envision the conduct of interdependent oligopolists in a static framework as opposed to the dynamic approach of tacit collusion theorists. Most of the literature devoted to those models focuses on testing their robustness,[81] by changing their specifications (for instance, product differentiation, large number of firms, advertisement, etc.),[82] or by applying new methodologies (for instance, empirical analysis, game theory, etc.). This stream of research can be referred to as non-collusive oligopolistic interdependence theory. It is clearly distinct from the literature on tacit collusion, despite the frequent mistakes made by scholars who often conflate both research areas.




## III. Drawing Policy Lessons from the Economic Theory

As elsewhere, economic studies on tacit collusion often reach inconsistent – not to say contradictory – findings. Yet, despite all their quarrels, economists agree on a string of basic principles. Those principles seem sufficiently sound and consensual to serve as bottom-lines for policy makers contemplating remedial action against tacit collusion.

[79] As noted by Stenborg, *op. cit.*, *supra* note 34, lawyers often confuse "*oligopoly*" with "*collusion*". Collusion is just a narrow branch of oligopoly theory.
[80] As well as Edgeworth and Von Stackelberg models.
[81] In economic theory, a model can be said to be "*robust*" when changes in its underlying assumption(s) do not alter its initial results.
[82] For instance, on product differentiation, *see* H. Hotelling, "Stability in competition", (1929) 39 *Economic Journal*, 41-57.

### *A. Like other forms of Collusion, Tacit Collusion generates Large Welfare Losses which deserve Antitrust Scrutiny*

Perhaps the main finding of oligopoly theory is that there is not a cigarette paper of conceptual difference between explicit and tacit collusion. Both types of collusion obey four similar conditions, *i.e.*, C1, C2, C3 and C4. On one side of the spectrum, the market characteristics are such that collusion arises spontaneously. On the other side, rivals must enter into an arrangement to reach and sustain collusion.[83]

In addition, tacit and express collusion yield similar adverse effects on consumer welfare. Both frustrate the various efficiencies ascribed to competitive markets – *i.e.*, allocative (downward pressure on prices), productive (downward pressure on costs) and dynamic (upward pressure on investments) efficiency – and protected by the competition rules. This, in turn, entails that tacit collusion should *a priori* be addressed under the competition laws, like explicit collusion. In contrast, other remedial routes should only be explored if no suitable remedy exists under the competition rules.

Finally, since tacit collusion is as nefarious as explicit collusion, it should be treated by enforcers with an equal degree of concern as cartels. One may also consider that it should be accorded a higher degree of priority than dominant firm conduct on the "most wanted" list of competition authorities, since the latter may generate productive and dynamic efficiencies.[84]

### *B. The Fact that Tacit Collusion is Infrequent in No Way defuses the Need for Remedial Intervention*

As in other areas of antitrust law (*i.e.*, vertical restraints, predatory pricing, tying, etc.), Chicago scholars –at least some of them – have come close to denying the very existence of tacit collusion.[85] In his best seller *The Antitrust Paradox*, Bork contends that "*there is good reason to doubt that such restraint exist, in the absence of explicit and detectable*

[83] J. Harrington, "How Do Cartels Operate?", in K. Viscusi (ed), *Foundations and Trends in Microeconomics*, Vol. 2, 2006, (who suggests that firm explicitly collude when they cannot tacitly collude or if explicit collusion is more profitable).

[84] Whilst the effects of scale on productive and dynamic efficiencies remain disputed, there are good reasons to believe that, at least in theory, a monopoly may yield economies of scale and investments in innovation.

[85] One may think, for instance, of the single monopoly profit theorem, which denies the existence of tying or to the well-known doctrines on predatory pricing, which would allegedly be a rare, irrational strategy – hence the need to prove recoupment.

*agreement*".[86] Likewise, scholars often claim that tacit collusion simply cannot be proven, absent a means to distinguish collusive price alignments from price competition.[87]

Taken literally, those assertions suggest that economists, including Nobel Prize winners, have spent over a century clutching at straws. Those familiar with XVIth century literature will notice the resemblance between Chicago scholars and the burlesque novels of Spanish poet Cervantes. After all, Chicago scholars portend that tacit collusion is the figment of someone's imagination, and that regulators should avoid turning themselves in *Don Quixotes* of oligopolistic markets. This wholly disregards the wealth of *ex post* empirical studies which bring evidence of tacit collusion in a variety of markets.[88]

That said, the view that pure, *contactless* tacit collusion is a rare phenomenon remains resilient, and cannot be ignored.[89] Moreover, controlled experiments have confirmed that whilst tacit collusion can well occur in simple market environments (duopolies, etc.), it is more difficult to sustain in complex settings, without communication amongst oligopolists (*e.g.*, unilateral signaling, etc.).[90]

The fact that an event is rare, however, does not remove the need for regulatory intervention. To take a somewhat provocative analogy, terrorist attacks, nuclear meltdowns and systemic financial crisis are all rare events which cause immense welfare losses on society. Yet, only a very few scholars would argue that preventive/corrective remedies are unwarranted in so far as such catastrophes are concerned.

Not unlike with other sorts of disasters, it is thus legitimate for public authorities to try to prevent tacit collusion (and make it even more rarer). In addition, since prevention is unlikely ever to be 100% successful, public authorities should be able to dismantle tacit collusion when it occurs, and mitigate its adverse consequences.

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[86] R. Bork, *The Antitrust Paradox – A Policy at War with Itself*, The Free Press, New York, 1993, p.175.

[87] F. Mezzanotte, "Using Abuse of Collective Dominance in Article 102 TFEU to Fight Tacit Collusion: the Problem of Proof and Inferential Error", (2010) 33(1) *World Competition*, 77-102.

[88] *See* the studies quoted *supra* at Section II.

[89] G. Werden, "Economic Evidence on the Existence of Collusion: Reconciling Antitrust Law with Oligopoly Theory", (2003-2004) 71 *Antitrust Law Journal*, 719, p.762; D. Neven, "Oligopolies and Competition Law", in B. Hawk (ed.), *Fordham Competition Law Institute*, 2008, 725, p. 749.

[90] For a good survey of this literature, *see* M. Stenborg, op.cit, *supra* note 34, pp.377-379. The results of experimental literature may be criticized on the ground that it is questionable whether students' behavior in laboratories matches the behavior of CEOs and reflects the inner dynamics and structures of firms. On this, *see* *Behavioural Economics as Applied to Firms: A Primer*, Economic Discussion Paper, March 2010, (Paper prepared for the Office of Fair Trading by M. Armstrong and S. Huck), OFT1213, p.11.

Although the Chicago school discourse is misguided, there may well be some merit to the contention that tacit collusion is infrequent. As a matter of public policy, this implies that tacit collusion should be fought under the existing regulatory toolbox, to limit legal engineering costs. In contrast, novel regulatory remedies should only be envisioned as a second order option.

### *C. Tacit Collusion has a Variety of Causes, so "One Size-Fits All" Remedial Approaches are Misguided*

Contrary to Harvard scholars' ominous prediction that oligopolies are poised to tip towards tacit collusion as the sole result of their concentrated market structure, modern economic theory has shown that the oligopoly problem is a multifactorial phenomenon. Tacit collusion stems from a variety of factors, endogenous (*e.g.*, product homogeneity) and exogenous (*e.g.*, dissemination of information by suppliers external to the oligopoly), private (*e.g.*, exchange of information agreements, cross-shareholdings amongst oligopolists) and public (*e.g.*, exchange of government regulations, state subsidies), etc.[91] Those plus factors have – albeit with a fluctuating degree of importance – a contributory effect on some (or all of) the key conditions C1, C2, C3 and C4. They are distinct from "*minus factors*", which undermine tacit collusion.

The upshot of this is that public authorities have a wealth of remedial options at their disposal to dissolve tacit collusion. They should thus disregard the over simplistic, one size fits all Harvard approach that advocates the application of structural remedies, and craft remedies that target other contributive factors. In other words, public authorities should take a "*panoramic*" perspective of the market subject to collusion, and try to resolve concerns on a case-by case basis, with the least costly, and most efficient remedy. In practice, given the wide scope and intrinsic flexibility of the competition rules, agencies can snipe at a number of weak spots, *e.g.*, dissolve contractual links amongst oligopolists, block M&A transactions, forbid certain types of unilateral conduct, engage in public advocacy, etc. In contrast, "*one-size-fits all*" remedial policies, such as deconcentration measures or structural divestitures ought to be avoided.[92]

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[91] W. E. Kovacic, R. C. Marshall, L. M. Marx and H. L. White, "Plus Factors and Agreement in Antitrust Law", (2011) 110(3) *Michigan Law Review*, 393 (who offer a slightly distinct definition of "*plus factors*" as factors that come on top, and seek to organize/strengthen a formal conspiracy).

[92] All the more so in industries where there are increasing returns on scale. Note that such measures have been strongly supported by Harvard scholars.

### *D. Tacit Collusion Theory has Little Predictive Accuracy, hence Preventive Remedies should remain Exceptional*

Just as mainstream economics, the theory of tacit collusion lacks predictive accuracy.[93] Nobel Prize winner G. Stigler once observed that "*with oligopoly, virtually everything is possible*",[94] hinting at IO theory's inability to anticipate tacit collusion.

Surely, economists concur with the basic conditions C1, C2, C3 and C4 that yield tacitly collusive outcomes in oligopolies.[95] A verification of those conditions should thus help forecast the risk of tacit collusion. However, the applied economics of tacit collusion are not as accurate as the basic theory. A first series of problems stems from *informational* issues. Inevitably, a range of factors which influence C1, C2, C3 and C4 remain beyond one's control. The oligopolists' psychological, social and historical background, which influences their decision to tacitly collude cannot be scrutinised by external observers.[96] An irrational oligopolist may well cheat regardless of the risk of costly punishment, simply because he wishes to maintain a reputation of aggressiveness in the market place. More generally, many other factors are notoriously complex to monitor and/or may be manipulated by oligopolists: costs, R&D investments, etc.

A second source of problems stems from *instability* issues. Many observable factors can either facilitate – a "+" effect – or undermine – a "–" effect – the satisfaction of one (or more) of C1, C2, C3 and C4. As a result, it is complex to anticipate – short of concrete *ex post* evidence – which of those effects will likely prevail in a given oligopoly. This problem has several facets. First, one given factor may simultaneously exert a + and – effect on a single core condition of tacit collusion. For instance, "*multi-market contacts*" entitle oligopolists to

[93] Ever since Maltus' gloomy predictions, and more than ever with the sudden financial crisis of the early XXIth century, the predictive value of economics is a cause of controversy, which led to economics being labeled the "dismal science".

[94] See G. J. Stigler, "Theory of Oligopoly", op.cit., *supra* note 20.

[95] See D. K. Osborne, "Cartel Problems", op.cit., *supra* note 30 ; D. Orr and P. W. McAvoy, "Price Strategies to Promote Cartel Stability", op.cit., *supra* note 30; I. Ayres, "How Cartel Punish: A Structural Theory of Self Enforcing Collusion", (1987) 87(2) *Columbia Law Review*, 295, p.296; T. Penard, "Collusion et comportements dynamiques en oligopole: une synthèse", mimeo, p.3.

[96] For instance, oligopolistic firms may be particularly prone to acting in parallel because their CEOs have been educated together and thus share strong cultural bonds. *See* F. M. Scherer and D. Ross, op. cit., *supra* note 33, pp.235-236, who provide the example of the dinners organized by Judge Elbert H. Gary, the President of US Steel's Board of Directors between 1907 and 1911. Judge Gary explained once that: "*these dinners generated such mutual respect and affectionate regard among steel industry leaders that all considered the obligation to cooperate and avoid destructive competition more binding than any written or verbal contract*".

punish deviations on a wider spectrum of products/territories (a C3+ effect).[97] Yet, retaliation on all markets may also prove overly costly (a C3– effect).[98]

Second, one given factor may simultaneously have a + effect on one condition and a – effect on a distinct condition. For instance, MFC clauses force would-be cheating oligopolists to extend any price cut to all their customers. Inevitably, any such action makes "*noise*" in the market and exacerbates the risks of detection (a C2+ effect). However, if rivals are bound by similar clauses, retaliation is likely to be costly (a C3– effect).[99]

Third, distinct industry features may exercise a conflicting effect on one and a same condition. For instance, a concentrated market structure generally yields a C1, C2+ effect, but a rapid pace of innovation generates a C1, C2– effect.

In light of the vagaries of the applied theory of tacit collusion, anticipating that a given factor will lead to one effect rather than another, invariably entails a degree of over-generalization and arbitrariness.[100] The same holds true when distinct factors point to opposite effects on C1, C2, C3 and C4. And to date, economists have been unable to work out which factor should prevail.

For years, agencies seemed to ignore those issues. Drawing inspiration from Posner's work, they initially embraced the so-called "*checklist*" approach, *i.e.* a crude box-ticking exercise whereby tacit collusion was deemed likely when + factors exceeded – factors. With advances in modern economic thinking, the checklist approach has, however, been abandoned in most antitrust jurisdictions.[101]

More recently, economists have developed quantitative techniques to predict – one should say measure – the likelihood of tacit collusion, following a change in the market environment.[102]

[97] B. D. Bernheim and M. D. Whinston, *op. cit., supra* note 40.
[98] S. Bishop and M. Walker, *The Economics of EC Competition Law*, 2nd Ed., Sweet&Maxwell, London, 2002, §7.60, p.288. In addition, in such a situation, oligopolists may have increased incentives to cheat, in the hope of reaping profits not only on one market, but also on the other markets on which they are active.
[99] The same applies to price transparency, which clearly has a C1, C2 and C3+ effect, but meanwhile facilitates entry opportunities, thereby giving rise to a C4 – effect.
[100] T. Kauper, "Oligopoly: Facilitating Practices and Plus Factors", in B. Hawk (ed.), *Fordham Competition Law Institute*, 2007, 751, pp.754-755. This is not to say that the literature on the effects of various industry features is useless, but that their manipulation requires a lot of caution on the side of agencies.
[101] D.T. Scheffman and M. Coleman, "Quantitative Analyses of Potential Competitive Effect from a Merger", (2003) 12(2) *George Mason Law Review*, 319, p.327.
[102] P. Massey and M. McDowell, "Joint Dominance and Tacit Collusion: Some Implications for Competition and Regulatory Policy", (2010) 6(2) *European Competition Journal*, 427 (who review the economic literature and confirm that it is complex to predict whether, following structural changes in a market, there is an increased

Those studies focus primarily on horizontal mergers, and share analogies with merger simulation techniques in unilateral effects cases.[103] In short, they seek to calculate the incremental payoffs of collusion pre- and post-merger, as opposed to competition.[104] However, and despite the increased sophistication of those models,[105] their predictive value remains a source of strenuous debate.[106]

Ideally, agencies should craft decisions on the basis of sound, robust and consensual economic theories. Given that economics does not (yet?) provide more than a crystal ball to forecast future equilibriums in oligopolies, decision makers should err on the side of caution, and only exceptionally enforce *ex ante* remedies in oligopolies.

### *E. The Fact that Tacit Collusion involves Rational Conduct is not a Cause of Exoneration under the Competition Rules*

likelihood of coordinated effects). See also, for an attempt to devise a screening device, D. Parker, "Screening Device for Tacit Collusion Concerns", (2006) 27(8) *European Competition Law Review*, 424.

[103] They simulate the payoffs of collusion and competition in a market with n – 1 firms. Scheffman and Coleman, op. cit., *supra* note 101; W. E. Kovacic, R. C. Marshall, L. M. Marx and S. P. Schulenberg, "Coordinated Effects in Merger Review: Quantifying the Payoffs from Collusion", in B. E. Hawk (ed.), *Fordham Corporate Law Institute*, 2006, 269; P. Sabbatini, "How to Simulate the Coordinated Effect of a Merger", *Collana Temi e Problemi*, Autorità Garante della Concorrenza e del Mercato, 2006; P. Davis "Coordinated Effects Merger Simulation with Linear Demands", Discussion Paper, UK Competition Commission, 2006; P. Davis and P. Sabbatini, "How to Simulate the Coordinated Effects of a Merger", 2008, mimeo; P. Davis and P. Sabbatini, "On the Anatomy and Application of Coordinated Effects Theories of Harm in Merger Cases", 2011, mimeo.

[104] Kovacic *et. al*. were amongst the firsts to introduce such a model. Interestingly, they calculate the payoffs of post-merger explicit collusion and post-merger competition. But in so doing, their study gives little guidance on the likelihood of post-merger tacit collusion. Surely, the authors argue that the measure of express collusion provides an upper bound and is thus a good proxy to assume that there will be collusion. However, one may consider that if the market players resort to express collusion post-merger, this implies that tacit collusion is not sustainable. Their model is also static in that it does not test the risk of entry or the risk of the oligopolists being fined by a competition agency in case of explicit collusion.

[105] More recently, P. Davis and P. Sabbatini, "On the Anatomy and Application of Coordinated Effects Theories of Harm in Merger Cases", op. cit., *supra* note 103, have brought an additional degree of sophistication, with the inclusion of "*incentives compatibility constraints*" (*e.g.*, risks of fines, multi-market contacts) and "*agreement and monitoring constraints*" (*e.g.*, need to reach consensus on the factor subject to coordination, costs of detection activities) in their model. Moreover, Davis and Sabbatini do not only focus on the post-merger payoffs, but also compare, for each market participant, how the value function of colluding compares to the option of defecting.

[106] Merger simulation techniques are often based on narrow and untested assumptions. They frequently confuse explicit and tacit collusion or rely on unilateral effect frameworks which are not fully transposable to coordinated effects cases. Finally, the simulation results are often sensitive to the details, and the modeling of demand functions is very complex. For a criticism, *see* M. Walker, "The Potential for Significant Inaccuracies in Merger Simulation Models", (2005) 1(3) *Journal of Competition Law and Economics*, pp 473-496. Coate also observes that those models work only with one theory of collusion and should thus be framed in the appropriate collusion theory. *See* M. B. Coate, "Alive and Clicking: Collusion Theories in Merger Analysis at the Federal Trade Commission", (2008) 4(2) *Competition Policy International*, 145, pp.157-158. Coate proposes three collusion theories, *i.e.*, maverick, general regime shift, and structuralism.

Now and again, some contend that it is ill-advised to apply the competition rules to tacit collusion on pain of condemning oligopolists for what constitutes purely rational behavior. This proposition rests on two specious arguments. The first involves flawed *moral* considerations (1). The second points out to moot *remedial* concerns (2).

<u>*1. Flawed Moral Justifications.*</u> Some scholars consider it unfair to classify tacit collusion as an antitrust infringement subject to penalties – administrative and in some jurisdictions criminal – and remedies.[107] Possibly influenced by the Harvard school, those scholars consider that tacit collusion is dictated to oligopolists by the structure of the market. Like firms that harm competition as a result of "*State compulsion*", oligopolists would be subject to what could be labeled "*market structure compulsion*". They would have no other rational choice but to adapt to each other's conduct, and tacitly collude. There would thus be no "*evil*" anticompetitive purpose behind tacit collusion. Hence, they should escape antitrust scrutiny, or at least, be exonerated from penalties (a "*no fault*" approach).

Albeit popular in US and EU scholarship, this line of reasoning is nonsensical. Since the early days of welfare economics, government intervention is deemed appropriate when the free, rational operation of markets leads to inefficient outcomes.[108] In this vein, competition laws seek to catch rational market conduct that distorts competition and in turn yields allocative (price), productive (costs) and dynamic (innovation, investments, products) inefficiencies, regardless of its purpose.

With this in mind, the fact that tacit collusion is rational conduct cannot, and should not, be a cause for excuse under the competition rules. In all areas of competition law, enforcement initiatives are taken against rational strategies, such as dominant firms' tactics that force out equally efficient rivals.[109] Yet, no one has ever argued that dominant firms' exclusionary conduct should enjoy blanket antitrust immunity, on the ground that it is rational. Clearly, rationality cannot be a solid basis to fabricate new antitrust immunity doctrines.

In addition, the view that oligopolists are coerced into tacit collusion by virtue of market features does not hold sway. On this, Posner rightly observed that tacit collusion is a strategy

[107] L. Sullivan, "Conscious Parallelism and the Sherman Act An Analysis and a Proposal", (1977) 30 *Vanderbilt Law Review*, 1227.
[108] Unless government intervention itself leads to inefficiencies. The definition of this paradigm dates back to the early works of Pigou. *See* A.C. Pigou, *The Economics of Welfare*, 4th ed.,Macmillan & Co., London, 1946.
[109] In the hope of charging higher prices in the long term.

that oligopolists deliberately chose.[110] Oligopolists could instead choose to cheat on the collusive equilibrium, and steal market share from the other.[111]

Finally, oligopolists often purposefully take additional measures to facilitate, adjust and/or protect a situation of tacit collusion. Hence, depicting oligopolists as passive spectators of tacitly collusive dynamics is misleading.

*2. Overstated Remedial Difficulties.* Several scholars have ventured that the antitrust prohibitions are unlikely ever to remedy tacit collusion. Turner was the first to claim that it would be odd (and unworkable) to request oligopolists to behave irrationally.[112] How, indeed, could agencies and courts enjoin order a firm to not take account of its rivals' behavior?[113]

On cursory examination, Turner's point is powerful.[114] Yet, it wholly disregards that competition law remedies go beyond "*cease and desist*" injunctions.[115] In many jurisdictions, and especially in Europe, agencies devise *ad hoc* behavioural and structural remedies when cease and desist injunctions are insufficient to restore competitive conditions.[116]

In addition, Turner's argument was based on Section 1 of the Sherman Act, an area of US antitrust law where remedies are rarely ordered. But Turner did not envision the possibility for agencies to run tacit collusion cases under Section 2 of the Sherman Act, where remedies are more conventional. As will be seen below, the choice of such a legal basis entails greater remedial flexibility.[117]

### *F. Oligopolies do Not Necessarily involve Large Efficient Firms*

[110] R. Posner, "Oligopoly and the Antitrust Laws: A Suggested Approach", op. cit., *supra* note 2 (suggesting to even inflict fines on tacitly colluding oligopolists).

[111] Of course, this strategy may not constitute a "*first best*" option from a profit maximization standpoint. But as often in competition law, the "*competitive*" strategy is not necessarily the most profitable for market players.

[112] D. F. Turner, "The Definition of Agreement under the Sherman Act: Conscious Parallelism and Refusals to Deal", (1962) 75 *Harvard Law Review*, 655; L. Sullivan, *op. cit*., *supra* note 107.

[113] J. R. Loftis III, "Coordinated Effects", Washington, D.C. 18 February 2004, mimeo. See also, See the words of Justice Breyer in 851 F.2d 478: Clamp-all Corporation, Plaintiff v. Cast Iron Soil Pipe Institute, 1988 §27: "*Courts [...] have almost uniformly held [...] that [...] individual pricing decisions (even when each firm rests its own decision upon its belief that competitors will do the same) do not constitute an unlawful agreement. That is not because such pricing is desirable (it is not), but because it is close to impossible to devise a judicially enforceable remedy for 'interdependent' pricing. How does one order a firm to set its prices without regard to the likely reactions of its competitors?*"

[114] As a matter of policy, absent a remedy, there should be no legal obligation.

[115] And sanctions.

[116] Of course, Turner's pessimism in relation to remedies hinged on the fact that courts, which are the primary enforcers of the competition rules in the US, cannot pronounce remedies.

[117] With this, competition agencies could render tacit collusion more complex, for instance by requesting oligopolists to eliminate so-called facilitating practices, rather than directly forbidding tacit collusion.

Oligopolies are commonly described as markets occupied by big firms. Nobel Prize winner Galbraith talked of oligopolists as "*giant corporations*".[118] In the same spirit, business newspapers, articles and books contain numerous references to "*Big Oil*", "*Big Steel*", the "*Big four*", etc.[119]

Interestingly, since the 1960s', the "*big*" oligopoly story has been a fertile ground for antitrust policy prescriptions.[120] On the one hand, disciples of the "*big is bad, small is beautiful*" doctrine have advocated strong enforcement initiatives against oligopolies taking the view that large firms are likely to harm small ones.[121] On the other hand, believers of "*there's no business but big business*" doctrine have argued that oligopolies should be tolerated, because large firms are cost-efficient and finance innovation through massive R&D expenditures.[122]

The "*big*" oligopoly story is, however, a fable. Many real-life oligopolies are indeed populated by small or medium sized-firms, for instance on local markets (*e.g*. oil distribution, groceries, etc.). The existence of an oligopoly only indicates that the industry total output/revenue is generated by a small number of – possibly small – firms.

Now beyond the optical illusion of conflating size and scale, there is truth to the contention that in oligopolies, each firm holds a relatively large market share. However, the existence of oligopolistic market shares is a weak basis to formulate antitrust policy prescriptions, other than misguided ones. The primitive Harvard school axiom that oligopolistic market shares denote the existence of unreasonable market power is long dead.[123] And most economists feel equally uncomfortable with the Chicago school correlation between oligopolistic market shares and efficiency in costs and innovation. Surely, oligopolistic market shares may trigger productive efficiency in industries where fixed costs are high. But there are many sectors

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[118] According to him, nothing characterized better the modern economy than "*the scale of modern corporate enterprises*". *See* J. K. Galbraith, *The New Industrial State*, Princeton University Press, Princeton, 2007, p.92.

[119] In consultancy, auditing and professional services. *See*, for instance, *The Economist*, Britain's auditing oligopoly, 18 May 2011, The 48-year itch.

[120] R. D. Atkinson, and D. B. Audretsch, "Economic Doctrines and Approaches to Antitrust", (2010) 5 *Innovations*, 163.

[121] This view, which has been popular until the 1960s, has been labeled as the "*populist*" antitrust doctrine. The US Supreme Court ruling in *Brown Shoe* marks the best judicial recognition of this. The Supreme Court stated that the purpose of antitrust law was to "*to promote competition through the protection of viable, small, locally owned businesses*". *See* U.S. Supreme Court, *Brown Shoe Co., Inc. v. United States*, 370 U.S. 294 (1962). More generally, see R. A. Skitol, "The Shifting Sands of Antitrust Policy: Where it Has Been, Where It Is Now, Where It Will Be in Its Third Century", (1999) 9 *Cornell Journal of Law & Public Policy* 239, p. 253; R. Pitofsky, "Antitrust in the Next 100 Years", (1987) 75 *California Law Review*, 817, p. 822.

[122] J. Surowiecki, *Big is Beautiful*, 31 October 2011, *The New Yorker*; J. Egan, *New anti-trust policy: big is beautiful*, 11 May 1981, 14(19) *New York Magazine*.

[123] And the ensuing ability to harm rivals. Market shares say little on the ability of oligopolists to raise prices/lower output. *See* L. Kaplow, "Market Share Thresholds: on the Conflation of Empirical Assessments and Legal Policy Judgments", (2011) 7(2) *Journal of Competition Law & Economics,* 243.

where fixed costs are not high. This is for instance the case of labor intensive sectors or of non-capital intensive industries, such as legal services. Moreover, in sectors where fixed-costs are high, oligopolistic market shares are still suboptimal, when compared to monopolistic market shares.[124]

In sum, the oligopolistic structure of a market says nothing of a firms' size. Similarly, oligopolistic shares say little on market power or efficiency. Decision makers should thus draw no inferences from oligopolistic structures or shares.

### *G. The Fluctuating Semantics of Economics and the Need for Lexical Rigor*

Scholars tag many labels onto the oligopoly problem: conscious parallelism, parallel conduct, parallel pricing, oligopolistic pricing suits, tacit collusion, tacit coordination, implicit collusion, imperfect cartels, non-cooperative collusion, tacit coordination, coordinated effects, self-enforcing collusion, etc. A common thread to those qualifications is the use of two-word expressions which combine a process component (tacit, implicit, conscious, imperfect, self-enforcing, etc.) and an outcome component (collusion, coordination, parallelism, etc.). Whilst lawyers often use expressions referring to "*parallelism*", economists seem to prefer the concept of "*collusion*".

Unfortunately, this variance in qualifications is the source of category errors. Lawyers accustomed to the "*one word-one meaning*" principle occasionally draw flawed distinctions amongst the above concepts.[125] For instance, despite the conventional view that "*tacit collusion*" and "*conscious parallelism*" are synonyms,[126] some lawyers still distinguish the former – a noxious practice that ought to be regulated – from the latter – a separate, rational phenomenon that ought not to be subject to antitrust enforcement.[127] Others have assimilated tacit collusion to the much wider notion of "*oligopolistic interdependence*". However, the concept of oligopolistic interdependence also covers sub-competitive oligopolies not prone to tacit collusion dynamics, such as supra competitive prices on Cournot markets; unilateral

[124] In addition, it ought to be noted in industries where *value* matters more than *volume* (*e.g.*, branded goods), firms may hold a large share of the market in value, but meanwhile not maximize output and reap economies of scale.
[125] Lawyers that are used to a strong degree of lexical discipline often take for granted that different words conceal distinct meanings.
[126] OECD *Glossary of Industrial Organization Economics and Competition Law*, §38. The OECD had the following, same definition for "*tacit collusion*" and "*conscious parallelism*": "*[oligopolistic] firms may after some period of repeated actions become conscious or aware of this fact and without an explicit agreement coordinate their behaviour as if they were engaged in collusive behaviour or a cartel to fix prices and restrict output*".
[127] L. Vitzilaiou and L. Constantinos, "The Slippery Slope of Addressing Collective Dominance Under Article 82 EC", 9 October 2009, *Global Competition Policy* (online), p.6.

price increases on markets with product or geographic differentiation; and unconscious parallelism on markets with switching costs, etc.[128]

Moreover, the use of loose, open-ended expressions may give rise to unsound expansions of the law.[129] In 2010, for instance, a novel concept of "*parallel accommodating conduct*" was introduced within the section of the US Horizontal Merger Guidelines devoted to "*coordinated effects*".[130] As observed by Prof. Neven, however, this new theory of harm is remote from the modern understanding of tacit collusion, and seems to be based on dubious economics.[131]

Those problems stem from the lack of semantic homogeneity in economic discourse. Often, economists use different terms to talk about one and a same issue.[132] Ideally, a standardized terminology should be used to clear-up all ambiguities. In our opinion, the choice of this terminology should follow five principles. First, the selected expression should clearly denote a market failure. Words such as "*parallelism*" should thus be avoided, given that parallelism is also a feature of perfectly competitive markets. Second, there should be no suggestion that the market failure stems from market concentration. Expressions that focus on the "*structure*" of the market, such as "*oligopoly power*", "*shared monopoly*" or "*group monopoly power*" are therefore inadequate. Third, the wording should clearly symbolize the absence of direct, formal, explicit – economists would say institutionalized – cooperation amongst oligopolists, like those found in secret cartels.[133] Accordingly, adjectives such as "*implicit*", "*tacit*", or "*non-cooperative*" must be brought on board.[134] Fourth, the chosen expression should be

[128] *See* on this last concept, the example provided by F. Mezzanotte, "Using Abuse of Collective Dominance in Article 102 TFEU to Fight Tacit Collusion: the Problem of Proof and Inferential Error", op. cit., *supra* note 87, pp.87-88.
[129] Scholars and practitioners have for instance voiced concerns that agencies could use the antitrust laws to address a hotch potch of oligopolistic market failures. Conversely, policy makers faced with heterogeneous, complex, and murky concepts may have been discouraged to address the oligopoly problem.
[130] See US Merger Guidelines, US DOJ and FTC, 19 August 2010, p.24: "*situations in which each rival's response to competitive moves made by others is individually rational, and not motivated by retaliation or deterrence nor intended to sustain an agreed-upon market outcome, but nevertheless emboldens price increases and weakens competitive incentives to reduce prices or offer customers better terms. Coordinated interaction includes conduct not otherwise condemned by the antitrust laws*".
[131] According to Neven, this new concept either (i) marks a conceptual retreat as regards the modern, sophisticated state of the theory of coordinated effects; or (ii) refers to unilateral effects dynamics and should have been labeled as such. *See* D. Neven, "First impressions on the Revised US and UK Merger Guidelines", 29 September 2010, *GRC Conference*, Brussels.
[132] Professor Gale very well summarized this: *"Economists are skilled at recognizing important issues and relationships and suggesting solutions to problems in an economy. Their approaches to addressing these matters are creative and intriguing. Yet, in the few terms reviewed here, the profession needs to agree on definitions and concepts of technical economic terms". See* J. Gale, "The Language of Economics", 13 November 2003, available at SSRN: http://ssrn.com/abstract=468642.
[133] Unlike in overt cartels (*e.g.* OPEC) or secret conspiracies.
[134] Along those lines, Rey draws the following distinction: "[*tacit collusion], in contrast to typical unlawful cartels, lacks explicit coordination mechanisms or information exchanges. However, explicit cartels and tacit collusion share many common features, since in both cases firms must have proper incentives to implement the*

sufficiently broad to convey the idea that coordination may arise on price, output, capacity, investment, advertisement and other competitive parameters. Expressions such as "*parallel pricing*" or "*oligopoly pricing*", which focus on price only, should thus be avoided. Finally, the expression should be reasonably simple and suggestive. With this in mind, our preference goes to tacit collusion (or coordination), implicit collusion (or coordination) or non-cooperative collusion (or coordination).

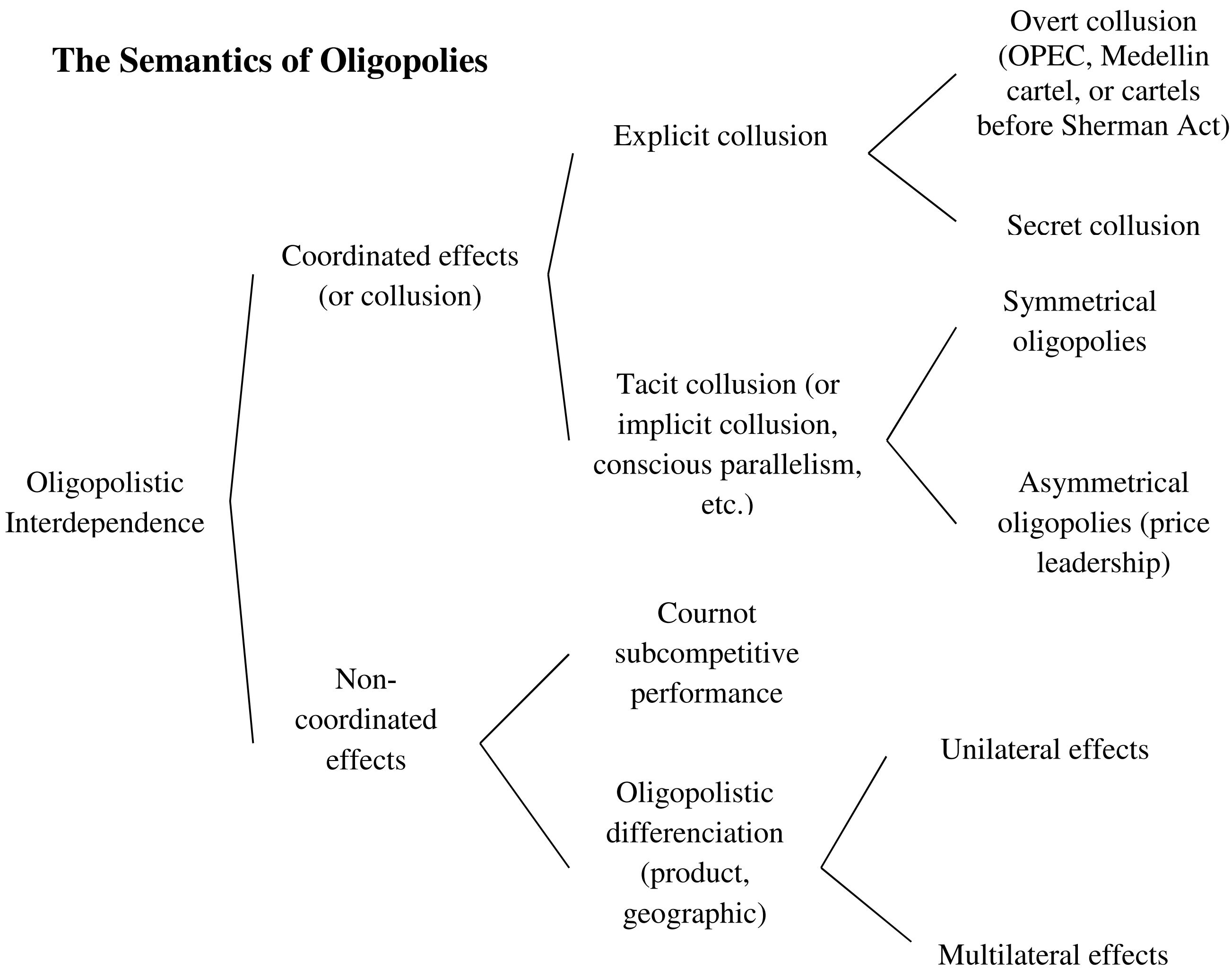


**Figure 1**

### *H. Importance of Market Definition for Tacit Collusion Analysis*

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*collusive agreement*". *See* P. Rey, "On the Use of Economic Analysis in Cartel Detection", in C.-D. Ehlermann and I. Atanasiu (eds.), *Enforcement of Prohibition of Cartels*, Hart Publishing, Oxford Portland, 2007.

To conclude this list of policy recommendations, we would like to say a brief word about market definition. In recent years, market definition has come under fire, in particular in the area of merger control. Thanks to the emergence of new evidentiary techniques, and notably of the "upward pricing pressure" Index, agencies can now arguably leapfrog market definition, and move directly to the assessment of a merger's possible anticompetitive effects.[135]

But those techniques have been designed to predict the possible anticompetitive effects caused by horizontal mergers in differentiated oligopolies. Moreover, they only test risks of anticompetitive unilateral effects. As a result, they are of little relevance for mergers that occur on homogeneous oligopolies and, at any rate, they say nothing of risks of tacit collusion.

Market definition remains necessary at least in all cases involving non-differentiated oligopolies. More simply, how can one talk of the existence of an "*oligopoly*", without a prior – and possibly crude – definition of the relevant market?

## IV. Current Legal Remedies in EU Competition Law

### *A. Overview*

Western competition statutes say nothing of oligopolies, let alone tacit collusion. The wording of the offenses planted in the US Sherman Act and the EU Treaties reflects the simplistic state of competition economics until the 1950s: at the time, monopoly and trusts/cartels (collective monopolies) were the alpha and omega of competition policy. In addition, in post-War Europe, oligopolistic concentration was perceived as a key driver of economic recovery.[136]

[135] J. Farrell and C. Shapiro, "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition", Working Paper, 15 February 2010, available at http://faculty.haas.berkeley.edu/shapiro/alternative.pdf ; J. Farrell and C. Shapiro, "UPP and Critical Loss Analysis: Response", Working Paper, February 2010, available at http://faculty.haas.berkeley.edu/shapiro/uppcritical.pdf.

[136] CJEU, Case 13-60, "*Geitling*", *Ruhrkohlen-Verkaufsgesellschaft mbH and others v High Authority of the European Coal and Steel Community*, ECR [1962], 143, where the Court confirmed the existence of an "*oligopoly gap*" in stating that the competition provisions "*evidence the intention of the authors of the treaty not to restrict […] the technical and commercial evolution which constantly augments the size of economic units, increasingly giving the coal and steel markets the character of an oligopoly*".

In the 1960s, progress in economic theory soon uncovered an "*oligopoly gap*" in statutory competition rules. At this point, oligopolies, which had been primarily a problem for economists, became a problem for lawyers. As with other market failures, the oligopoly gap might deserve to be addressed under the competition rules. In its 1965 Memorandum on concentration in the Internal Market, the European Commission (the "Commission") raised for the first time eyebrows at the increasing level of oligopolistic concentration and the ensuing risks of parallel conduct.[137]

In line with Hart's open-texture theory, EU lawyers turned to the existing toolbox in a quest to find remedies for tacit collusion.[138] Generally, the main merit of such approach is to engender low legal engineering costs. But it also has downsides, notably the rigidity that stems from the need to observe existing case-law principles.

It took approximately a half century for the EU competition system to settle around a stable remedial mix. In essence, *ex post* remedies have been *de jure* or *de facto* disabled. The prohibition of anticompetitive coordination enshrined in Article 101 TFEU does not cover tacit collusion. Similarly, whilst the case-law has recognized the applicability of abuse of dominance law to tacit collusion through the notion of "*collective dominance*", Article 102 TFEU has in practice never been enforced on an oligopolistic market.

In contrast, the *ex ante* merger control rules have trumped other remedial approaches. In Europe, a structural, "*no-conduct*" approach prevails to address risks of tacit collusion on oligopolistic markets.[139] In this section, we review the history of the positive law, leaving until the next section the question about whether the current remedial approach is desirable. Readers familiar with the history of tacit collusion in EU competition law can jump directly to our conclusion at E.

### *B. Article 101 TFEU, the "Oligopoly Defense" and the Indirect Regulation of Facilitating Practices*

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[137] Mémorandum de la Commission des communautés européennes du 1er décembre 1965 sur la concentration dans le marché commun, (1966) *Revue Trimestrielle de Droit Européen*, p.675.
[138] H.L. A. Hart, *The Concept of Law*, Clarendon Press, Oxford, 1961, pp.120-132.
[139] The same approach prevails in the US. *See* R. E. Nielson, "The No-Conduct Approach to Monopoly Power and Its Application to Oligopoly", (1981) 15 *Valparaiso University Law Review*, 529.

1. *Oligopoly as a Defense to the Direct Application of Article 101 TFEU*. Article 101 TFEU enshrines a potentially attractive remedy against tacit collusion. Couched in broad terms, it outlaws a range of anticompetitive coordinations, such as "*agreements, concerted practices and decisions of associations of undertakings*" amongst independent firms. In addition, its primary purpose is to combat collusion, and, as seen above, there is little difference between tacit and explicit collusion. As Posner explained, their main difference is a matter of proof.[140] Whilst explicit collusion can be proven with hard, tangible evidence, tacit collusion ought to be proven with economic evidence.

The Court of Justice of the EU ("CJEU"), however, never shared this view. Fearing, possibly, that the Commission would attempt to fill the oligopoly gap with Article 101 TFEU, the CJEU has, since the 1960s, gradually shut out any possibility to apply directly Article 101 TFEU to tacit collusion. The first relevant case is *Dyestuffs*. In 1969, the Commission found that ten firms that had applied three general and uniform price increases were guilty of unlawful "*concerted practice*". On close examination, the case was a far cry from a "*pure*" tacit collusion scenario. The Commission had found evidence that the dyestuffs producers met on several occasions.[141]

On appeal, the applicants invoked the so-called "*oligopoly defense*". They argued that the Commission had not proven the existence of a "*concerted practice*", and had erroneously conflated this notion with "*conscious parallelism of members of an oligopoly, whereas such conduct is due to independent decisions adopted by each undertaking, determined by objective business needs*".[142] According to the applicants, the dyestuffs market exhibited the features of a "*barome[tric]*" oligopoly. This, and not explicit collusion, was the true cause of the impugned pricing parallelism. Implicit in the applicants' argument was the idea that firms should not be condemned for what constitutes a natural market phenomenon.[143]

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[140] R. Posner, "Oligopoly and the Antitrust Laws: A Suggested Approach", op. cit., *supra* note 2, p. 1578: "*The biggest problem in applying section 1 of the Sherman Act to tacit collusion is that of proof: How can the existence of noncompetitive pricing be established without any proof of acts of agreement, implementation, or enforcement? Without denying that these will be extremely difficult cases, one can point to several types of evidence that should convince the trier of fact that sellers are guilty of tacit collusion as that term is used here*".
[141] Commission Decision, IV/26.267, *Matières colorantes*, [1969] OJ L 195/11. Yet, the existence of similar, parallel actions had played a key role in the Commission's evidence.
[142] CJEU, Case 54/69, *SA française des matières colorantes (Francolor) v Commission*, ECR [1972] 851, §§39 and 45.
[143] *Idem*, §49.

The Court sided with the Commission's decision, finding the evidence of explicit collusion to be conclusive. However, in a somewhat unclear statement, it also upheld the applicant's argument that parallel pricing did not constitute a concerted practice under Article 101 TFEU when it reflects the "*normal conditions of the market*".[144]

Surprisingly, the CJEU's judgment fuelled criticism. Prof. Joliet, a ferocious opponent to the application of Article 101 TFEU to tacit collusion, lambasted the Court's weak economic analysis.[145] Whilst the Court rightly recognized the oligopoly defense as a matter of principle, it failed, on the other hand, to scrutinize the outcome that would have prevailed under "*normal*" market conditions, thereby leaving wholly ineffective the nascent oligopoly defense. In addition, and maybe more importantly, the definition of the notion of "*concerted practice*" articulated in the ruling left space for ambiguities. The Court had defined a concerted practice as "*a form of coordination between undertakings which, without having reached the stage where an agreement properly so-called has been concluded, knowingly substitutes practical cooperation between them for the risks of competition*".[146] This definition did not clearly remove tacit collusion from the ambit of the Article 101 TFEU prohibition.[147]

Whilst in subsequent years the Commission made no further attempts to combat tacit collusion under Article 101 TFEU,[148] the Court did cease every possible opportunity to confirm that conscious parallelism falls short of Article 101 TFEU. In the *Sugar* case, it held that Article 101 TFEU "*does not deprive economic operators of the right to adapt themselves*

[144] *Id.*, §53: "*although parallel behaviour may not by itself be identified with a concerted practice, it may however amount to strong evidence of such a practice if it leads to conditions of competition which do not correspond to the normal conditions of the market, having regard to the nature of the products, the size and number of the undertakings, and the volume of the said market*".
[145] R. Joliet, "La notion de pratique concertée et l'arrêt ICI dans une perspective comparative", (1974) 3(4) *Cahiers de droit européen*, 251, p.285.
[146] CJEU, Case 54/69, *SA française des matières colorantes (Francolor) v Commission*, *supra* note 142, §51.
[147] L. Kaplow, "On the Meaning of Horizontal Agreements in Competition Law, (2011) 99(3) *California Law Review*, 683, p. 773 arguing that the *Dyestuffs* ruling "*see[med] to suggest that interdependent oligopoly behavior (without more) is covered by the prohibition*".
[148] In the *Zinc Producer Group* decision, the Commission will drop charges of concerted practices over price changes. The Commission found evidence of barometric price leadership, but nothing that went really beyond that. In the Commission's words: "*The situation prevailing in this case seems to have been more characteristic of that which could give rise to what is known in economic theory as 'barometric price leadership'. This does not remove from undertakings the ability to 'determine independently the policy which (they intend) to adopt on the common market'. Under such circumstances, parallel pricing behaviour in an oligopoly producing homogeneous goods will not be in itself sufficient evidence of a concerted practice*". *See* Commission Decision 84/405/EEC of 6 August 1984, IV/30.350 - zinc producer group, OJ L 220, 17/08/1984 p.27-45, §§75-76.

*intelligently to the existing and anticipated conduct of their competitors*".[149] It further noted – that "*the fact that a vendor aligns his price on the highest price charged by a competitor is not necessarily evidence of a concerted practice but may be explained by an attempt to obtain the maximum profit*".[150]

But it is the *Woodpulp II* case that marked the culmination of this case-law, with the most straightforward application to date of the "*oligopoly defense*".[151] On face value, the case had little to do with tacit collusion. The Commission had found 40 firms guilty of an infringement of Article 101 TFEU for a slew of collusive practices, including price fixing agreements, exchange of information through trade associations, etc. Amongst those practices, the Commission had in particular taken objection with two courses of parallel conduct, namely the fact that over several years (i) future prices for bleached sulphate woodpulp had been announced at similar periods and were of a nearly equivalent magnitude (announced prices); and (ii) actual prices charged to customers were similar (transaction prices).[152] A thorough reading of the decision reveals that the Commission had not brought much hard evidence of coordination. But the Commission had carefully attempted to establish that the conduct could not be plausibly explained as "*independently chosen parallel conduct in a narrow oligopolistic situation*".[153]

On appeal, the discussion focused on the Commission's findings in relation to announced prices.[154] Presumably influenced by Prof. Joliet – then appointed Judge at the CJEU – the Court first affirmed, as a matter of principle, that "*parallel conduct cannot be regarded as furnishing proof of concertation unless concertation constitutes the only plausible explanation for such conduct*".[155] Turning to the facts, the Court found, with the help of two experts' reports,[156] that the system of upfront price announcements had been requested by the wood

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[149] CJEU, Case 40/73, *Suiker Unie and others v. Commission*, ECR [1975] 1663, §174 .
[150] *Idem*, §285. *See* also CJEU, Case 172/80, *Züchner v. Bayerische Vereinsbank*, ECR [1981] 20211, §14: "*it is correct to say that this requirement of independence does not deprive traders of the right to adapt themselves intelligently to the existing or anticipated conduct of their competitors*".
[151] CJEU, Joined Cases C-89, 104, 114, 116-117, 125-129/85, *A Åhlštröm Osakeyhtiö v. Commission*, ECR [1993] I-1307.
[152] Commission Decision 85/202/EEC of 19 December 1984, IV/29.725 – *Wood pulp*, OJ L 85, 26/03/1985, pp. 1–52, §83.
[153] *Idem*, §82.
[154] The part of the decision relating to transaction prices has been annulled for procedural reasons.
[155] CJEU, Case C-89/85 *et al.*, *A Åhlštröm Osakeyhtiö v. Commission*, *supra* note 151, §71.
[156] *Idem*, §§31-32. The judgment's summary economic analysis may be criticized. However, it should not be forgotten that the judgment draws on two comprehensive experts' reports. The lack of transparency of this has been criticized.

pulp customers themselves after World War II, to anticipate on their future costs and prices.[157] Moreover, a great degree of transparency prevails on the market, as a result of information exchanges amongst buyers,[158] hub and spoke practices,[159] the dynamic trade press,[160] etc. Lastly, whilst the Commission had argued that a market structure with more than 50 producers should have inherently led to competition,[161] the Court found that the pulp sector was in reality composed of a "*group of oligopolies*", which all exhibited intrinsic features consistent with price parallelism.[162]

With all this, the Court eventually applied the "*oligopoly defense*". It stated that the impugned parallelism of prices "*may be satisfactorily explained by the oligopolistic tendencies of the market*". Absent proof of unlawful concertation under Article 101 TFEU, it thus vacated the Commission's decision.[163]

Looking at the *Woodpulp II* judgment with hindsight, the Court's analysis is not exempt from criticism. From an economic standpoint, the Court's reasoning, and the expert reports, are questionable.[164] The judgment for instance talks of oligopolies in a sector comprising several dozens of market players, and without ever defining a relevant market.

Conversely, the Court's ruling can be praised on grounds of legal certainty. It has in particular made crystal clear that Article 101 TFEU did not directly outlaw tacit collusion.[165] This solution has since then been remarkably stable. It is also the principle that prevails in US antitrust law.

*2. Indirect Application of Article 101 TFEU to Facilitating Agreements.* Implicit in the *Woodpulp* ruling was the idea that if tacit collusion cannot be forbidden when it arises as a result of natural oligopolistic dynamics, Article 101 TFEU ought however to kick in to catch

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[157] *Id.*, §77.
[158] *Id.*, §84
[159] *Id.*, §86
[160] *Id.*
[161] Commission Decision, *supra* note 152, §50.
[162] CJEU, Case C-89/85 *et al.*, *A Åhlštröm Osakeyhtiö v. Commission*, *supra* note 151, §§102-120.
[163] *Idem*, §127.
[164] L. Kaplow, op. cit., supra note 147, p775.
[165] Of course, this solution may lead to abuses in administrative proceedings, with firms opportunistically invoking the oligopoly defense even in the face of incriminating evidence. *See*, on this, J. Joshua and C. Harding, *Regulating Cartels in Europe – A Study of Legal Control of Corporate Delinquency*, Oxford University Press, Oxford, 2003, p.150.

practices which "*artificially*" favour tacit collusion.[166] And, as explained previously, there are very many practices in the form of agreements which may facilitate tacit collusion. With this background, and quite paradoxically, tacit collusion, which had been heralded as a defense to the direct application of Article 101 TFEU has progressively become a theory of harm in many other areas of Article 101 TFEU enforcement. In essence, Article 101 TFEU catches four types of facilitating practices.

First, Article 101 TFEU catches horizontal cooperation agreements amongst oligopolists which facilitate collusion, including tacit collusion.[167] The 2011 Guidelines on horizontal cooperation agreements hold that information exchange agreements,[168] R&D agreements,[169] production agreements,[170] joint purchasing agreements,[171] joint commercialization agreements,[172] standardization agreements,[173] can all facilitate a "*collusive outcome*", and might thus be declared incompatible pursuant to Article 101(1) TFEU.[174] The Guidelines' concern is that horizontal cooperation agreement may lead to the circulation of "*strategic information*" or the "*commonality of costs*" amongst parties and, in turn, facilitate tacit collusion.

[166] CJEU, Case C-89/85 *et al.*, *A Åhlštröm Osakeyhtiö v. Commission*, *supra* note 151, §126. To uphold the oligopoly defense, the Court declared that "*the similarity in the dates of price announcements may be regarded as a direct result of the high degree of market transparency, which does not have to be described as artificial*". *See* also §183. *See* also, for a recent confirmation, CJEU, Case 8/08, *T-Mobile Netherlands BV, KPN Mobile NV, Orange Nederland NV and Vodafone Libertel NV v Raad van bestuur van de Nederlandse Mededingingsautoriteit*, ECR [2009] I-4529, §33 (on concertations on exchange of information): "*This requirement of independence does not deprive economic operators of the right to adapt themselves intelligently to the existing or anticipated conduct of their competitors, it does, none the less, strictly preclude any direct or indirect contact between such operators by which an undertaking may influence the conduct on the market of its actual or potential competitors or disclose to them its decisions or intentions concerning its own conduct on the market where the object or effect of such contact is to create conditions of competition which do not correspond to the normal conditions of the market in question, regard being had to the nature of the products or services offered, the size and number of the undertakings involved and the volume of that market*".

[167] Communication from the Commission — Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, OJ C 11, 14/01/2011, pp.1-72, §§35-37

[168] *Idem* §65-68.

[169] *Id.* , §§ 124 and 127.

[170] *Id.*, §158 and §§175-180.

[171] *Id.*, §§213-215.

[172] *Id.*, §§242-245.

[173] *Id.*, §265

[174] Id., §37, where it is stated in general terms that "*A horizontal agreement may therefore decrease the parties' decision-making independence and as a result increase the likelihood that they will coordinate their behaviour in order to reach a collusive outcome but it may also make coordination easier, more stable or more effective for parties that were already coordinating before, either by making the coordination more robust or by permitting them to achieve even higher prices*".

Second, Article 101 TFEU outlaws vertical agreements that facilitate tacit collusion. The 2010 Guidelines on vertical restraints notably "*aim at preventing* […] *the facilitation of collusion*" that stems from vertical agreements, at either supplier and/or distributor level.[175] The text makes clear that the concept of collusion used in the Guidelines means "*both explicit collusion and tacit collusion (conscious parallel behaviour)*".[176] At a higher level of granularity, the text provides guidance on the collusion facilitating effect of cumulative single branding,[177] exclusive distribution,[178] multiple exclusive dealerships,[179] exclusive customer allocation,[180] selective distribution,[181] upfront access payments,[182] category management agreements,[183] resale price maintenance,[184] recommended prices,[185] etc.

Third, Article 101 TFEU covers a number of agreements that create financial links amongst oligopolists.[186] Those agreements are generally labeled passive investments. They include agreements giving rise to the acquisition of minority shareholdings in a rival oligopolist, cross-shareholdings, interlocking directorates, etc.[187] Whilst the applicability of Article 101(1) TFEU in this field has been disputed,[188] the Court's ruling in *Philip Morris* and subsequent Commission practice have confirmed that such agreements fall foul of Article 101(1) TFEU.[189]

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[175] Communication from the Commission — Guidelines on Vertical Restraints, OJ C 130/01, 19/05/2010, pp. 1-46, §100.
[176] *Idem*, footnote 1.
[177] *Id.*,§130 and §134.
[178] *Id.*,§151.
[179] *Id.*,§154.
[180] *Id.*,§168.
[181] *Id.*,§175.
[182] *Id.*, §206.
[183] *Id.*, §§211-212.
[184] *Id.*, §224.
[185] *Id.*, §227.
[186] CJEU, Cases 142 and 156/84, *BAT and Reynolds v. Commission*, ECR [1987] 4487; Commission Decision 94/579/EC of 27 July 1994, IV/34.857 - BT-MCI, OJ L 223, 27/8/1994, pp. 36–55; Commission Decision 94/771/EC of 11 November 1994, IV/34.410 - Olivetti-Digital, OJ L 309, 2/12/1994, pp. 24–31.
[187] Those agreements often fall short of the EU Merger Regulation. They can take very many forms (for example, a standard S&P agreement). A. Ezrachi and D. Gilo, "EC Competition Law and the Regulation of Passive Investments Among Competitors", (2006) 2(2) *Oxford Journal of Legal Studies*, 327.
[188] *See*, for a presentation of this doctrinal controversy, R. A. Stuijlaart, "Minority Share Acquisitions below the Control Threshold of the EC Merger Regulation: An Economic and Legal Analysis", (2002) 25(2) *World Competition*, note 71, p.191; F. Russo, "Abuse of Protected Position? Minority Shareholdings and Restriction of Markets' Competitiveness in the European Union", Working Paper No. 2006-12, Amsterdam Center for Law & Economics, pp.16-17.
[189] In the same sense, *see* F. Caronna, "Article 81 as a Tool for Controlling Minority Cross-Shareholdings between Competitors", (2004) 4 *European Law Review*, 485.

Finally, technology transfer agreements may infringe Article 101 TFEU if they facilitate tacit collusion. In general terms, the 2004 Guidelines on Technology Transfer Agreements state that technology transfer agreements may lead to the "*facilitation of collusion, both explicit and tacit*" between owners of competing technologies.[190] They provide further details on the risks of collusion that stem from licensing agreements amongst competitors,[191] non-compete obligations,[192] patent pools,[193] etc.

In sum, the EU lawmakers seem well aware that agreements amongst oligopolists may act as + factors. Strangely, however, the Commission's enforcement record against facilitating practices remains weak. In recent years, the Commission brought little if no Article 101 TFEU cases against facilitating agreements in tight oligopolies. This is problematic in areas where Guidelines are not available (for instance, passive investments), because stakeholders are left with little guidance.

Moreover, with limited exceptions, the substantive standards that guide the assessment of facilitating agreements are rudimentary. Often, the applicable texts suggest an impressionistic assessment, with a strong focus on market structure. In contrast, the four conditions of tacit collusion identified in modern competition economics are not systematically mentioned. This is unfortunate. Only if those 4 conditions are met can there be a facilitating effect on collusion, as otherwise tacit collusion is just impossible. Surely, an agreement that facilitates C1 in a market where C2, C3, and C4 are not met does in the abstract facilitate tacit collusion. But in reality, tacit collusion remains very unlikely. The agreement will simply make it a little less unlikely, but by a very thin margin.[194]

### *C. Article 102 TFEU, the Theory of "Collective Dominance" and the Commission's anomalous Enforcement Practice*

*1. <u>The Slow Rise of a Judicial Doctrine of Collective Dominance.</u>* In the early 1960s, US scholars such as Prof. Rahl had suggested the development of a case-law which would bring the "*shared monopoly power*" of oligopolies within the reach of Section 2 of the Sherman

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[190] Commission Notice — Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, OJ C 101/2, 27/04/2004, §141(1).

[191] *Idem*, §143. The Guidelines also talk of collusion at the licensees level, §145.

[192] *Id.,* §198.

[193] *Id.,* §234.

[194] This relaxes the burden of proof that bears on the Commission to forbid facilitating agreements.

Act.[195] With the ambiguities surrounding the applicability of Article 101 TFEU to tacit collusion (and its progressive obstruction), European scholars followed a similar approach, and turned to Article 102 TFEU. In contrast to Section 2 of the Sherman Act, however, the Treaty offers the "*advantage*" of providing an explicit textual basis to this end. Article 102 TFEU indeed treats as unlawful the "*abuse by one or more undertakings of a dominant position*".[196]

The first vindication of this possibility came in 1965. A group of professors appointed by the Commission to study the problems raised by the interpretation of Article 102 TFEU,[197] alluded to the possibility to apply abuse of dominance law to oligopolistic price leadership.[198] In subsequent years, the idea gained traction and a number of eminent scholars made similar proposals.[199] Prof. Joliet, for instance, argued that the wording of Article 102 TFEU embraced "*collective market domination*" situations which, in turn, covered "*the conjectural interdependence of action characteristic of tightly oligopolized industries*".[200]

The proposed interpretation of Article 102 TFEU remained, however, wholly disputable. Literally, Article 102 TFEU refers to the "*abuse by one or more undertakings*", and thus seems to covers the participation of several companies to an abuse, rather than a joint market position. Looking at the law in context, moreover, the Treaty drafters purported to target the so-called German "*Konzerns*", that is groups of firms that were legally distinct, but subject to a unified economic management, including vertically related companies (mother and subsidiaries).[201]

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[195] R. Joliet, *Monopolization and Abuse of a Dominant Position – A Comparative Study of the American and European Approaches to the Control of Economic Power*, Collection scientifique de la faculté de droit de l'université de Liège, Martinus Nijhoff, La Haye, 1970, p.299.

[196] *Idem*, p.298. Article 102 TFEU's applicability to tacit collusion amongst independent oligopolistic firms thus seemed, at first sight, wholly conceivable (by contrast to US antitrust law). Joliet talked of a "*gap*" in US antitrust law.

[197] "*Concentration of Enterprises in the Common Market, Memorandum of the EEC'*, Commission of December 1, 1965", (1966) 26 *Common Market Reports*.

[198] Opinion of Advocate General Mayras in *Dyestuffs*, CJEU, Case 48/69, *ICI v Commission,* 14 July 1972, ECR [1972] 619. This view seemed also to be shared by early German scholars. *See* R. Joliet, op. cit., *supra* note 195, footnote 723. A French scholar who has reviewed of the preparatory works of the Treaty and minutes of meetings has however argued that the use of the expression "*one or more*" is not fortuitous, and was aimed at encompassing the situation of interdependent oligopolists. *See* S. C. Belmont, *Essai sur la notion de position dominante collective en droit communautaire*, Atelier National de Reproduction des Thèses, Lille, 1999, §§556-557.

[199] B. Goldman, "Chronique jurisprudentielle de la Cour de Justice des Communautés Européennes", (1973) *Journal de Droit International*, 925,p. 939.

[200] R. Joliet, op. cit., *supra* note 145, p.239.

[201] *Idem*, p.238.

This notwithstanding, in the early 1970s the Commission made a first attempt at grappling with the notion of collective dominance. In the midst of the 1973 oil crisis, the two main oil distributors in the Netherlands, BP and Gulf, had reduced supplies to one of their customers, ABG, meanwhile maintaining supplies to others. In a provisional report on the case, the Commission considered that BP and Gulf collectively held a dominant position on the Dutch market, and could thus be investigated for abuse under Article 102 TFEU.[202] Whilst the final Decision in the case remained mute on collective dominance,[203] the Commission reaffirmed, in subsequent years, its interest in the concept in several annual reports.[204]

The growing willingness of the Commission to control oligopolies with Article 102 TFEU sparked resistance at the Court of Justice. Consistent with its judicial policy under Article 101 TFEU, the Court initially exported the "*oligopoly defense*" to Article 102 TFEU. With a straightforward *obiter dictum*, the CJEU held in *Hoffmann-La Roche* that:

> "*a dominant position must also be distinguished from parallel courses of conduct which are peculiar to oligopolies in that in an oligopoly the courses of conduct interact, while in the case of an undertaking occupying a dominant position the conduct of the undertaking which derives profits from that position is to a great extent determined unilaterally*".[205]

The blanket exclusion of tacit collusion from Article 102 TFEU was confirmed in subsequent cases. In *Binon*, *Ahmed Saeed* and *Alsatel Novasam*, the Court rebuffed invitations from parties, Advocates General and the Commission to apply the notion of collective dominance.[206]

Remarkably, the Court's conservatism did not dissuade the Commission from concocting its first abuse of collective dominance case in 1988.[207] In the *Italian Flat Glass* case, the Commission found that three producers of flat glass had unlawfully colluded pursuant to

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[202] Report of 10 December 1975 on the behaviour of the oil companies in the Community during the crisis of autumn–winter 1973–1974, COM(1975).

[203] Commission Decision 77/327/EEC of 19 April 1977, IV/28.841 - *ABG/Oil companies operating in the Netherlands*, OJ L117, 9/05/1977, pp. 1-16 .

[204] *See* VIIIth Annual Report on Competition Policy, 1978, p 256; IXth Annual Report on Competition Policy, 1979, p 190. *See* in particular XVIth Annual Report on Competition Policy, 1986, §331.

[205] CJEU, Case 85/76, *Hoffmann-La Roche & Co. AG v Commission*, 13 February 1979 ECR [1979] 461, §39.

[206] CJEU, Case C-243/83, *SA Binon et Cie v SA Agences et messageries de la presse,* 3 July 1985, ECR [1985] 2015; CJEU, Case C-66/86 *Ahmed Saeed Flugreisen et Silver Line Reisebüro GmbH v Zentrale zur Bekämpfung unlauteren Wettbewerbs eV*, 11 April 1989, ECR [1989] 803; CJEU, Case C-247/86, *Société alsacienne et lorraine de télécommunications et d'électronique (Alsatel) v SA Novasam*, 5 October 1988, ECR [1988] 5987.

[207] Commission Decision of 7 December 1988, IV/31.906, *Flat glass* (Italy), OJ L 33, 4/02/1989, § 44.

Article 101 TFEU and collectively abused a dominant position under Article 102 TFEU. According to the Commission, the market position of the various firms could be jointly examined, because the "*undertakings present themselves on the market as a single entity and not as individuals*".[208] Given that the parties jointly controlled between 79 and 95% of the market, they held a collective dominant position. In turn, the Commission found the parties guilty of a variety of abuses under Article 102 (a) and (b) (*e.g.*, restriction of consumer's ability to choose sources of supplies, setting of sales quotas, etc.).[209]

The Decision was appealed before the nascent General Court (at the time "Court of First Instance"). The pleadings revolved around the expression "*more undertakings*" enshrined in article 102 TFEU. The parties and the UK government sustained that this expression covered the situation of "*undertakings [that] form part of one and the same single economic entity*" – in other words corporate groups – whose internal agreements fall short of Article 101 TFEU by virtue of the "*single economic entity*" doctrine.[210] In contrast, the Commission offered a more extensive reading: the concept of a collective dominant position could be applied to wholly independent undertakings, provided that – in addition to a high joint market share – they present themselves "*as a single entity and not as individuals*",[211] in the presence for instance, of "*structural links*" (*e.g.*, a "*systematic exchange of products*").[212]

To solve this interpretation issue, the GC relied on a systematic, cross-sectional reading of the Treaty.[213] When Article 101 TFEU refers to agreements or concerted practices between "*undertakings*", it refers to relations between two or more economic entities capable of competing with one another.[214] Hence, when Article 102 TFEU refers to "*undertakings*", there is no legal or economic reason to suppose that the term has a different meaning.[215]

[208] *Idem*, §79. This uniformity of conduct resulted from several elements, including a "*marked degree of interdependence with regards to prices and terms of sales*", as well as "*structural links relating to production through the systematic exchange of products*".
[209] *Id*., §§79-80.
[210] GC, Case T-68/89 and T-77–78/89 *Società Italiana Vetro SpA, Fabbrica Pisana SpA and PPG Vernante Pennitalia SpA v Commission,* ECR [1992] II-1403, §§342-343.
[211] *Idem*, §350.
[212] *Id*. The Commission repeatedly insisted that it did not apply the concept of collective dominance "*solely on the ground that [the parties] form part of a tight oligopoly*", arguably to avoid annulment on the basis of the *Hoffmann-La Roche* obiter dictum.
[213] *Id*., §§357-358.
[214] *Id*., §357.
[215] *Id*., §358. The Court also noted, at §359 that: "*the Court finds support for that interpretation in the wording of Article 8 of Council Regulation (EEC) No 4056/86 of 22 December 1986 laying down detailed rules for the application of Articles 85 and 86 of the Treaty to maritime transport (Official Journal L 378, p. 4). Article 8(2) provides that the conduct of a liner conference benefitting from an exemption from a prohibition laid down by*

Consequently, a collective dominant position can be held by several independent undertakings that compete against one another on a relevant market.[216]

While bringing a welcome clarification, the judgment however introduced new uncertainty. The Court held that:

> "*there is nothing, in principle, to prevent two or more independent economic entities from being, on a specific market, united by such economic links that, by virtue of that fact, together they hold a dominant position vis-à-vis the other operators on the same market*".[217]

A finding of a collective dominant position thus entails proof that the parties are united by "*economic links*". From this point onwards, the scholarly debate on collective dominance focused almost exclusively – some would say obsessively – on defining what constitutes "*economic links*". Some contended that economic links cover direct and indirect agreements amongst independent firms.[218] Others argued that they encapsulate (also or only) the situation of interdependence found in tight oligopolies.[219]

*2.* <u>*Indirect Clarifications in Merger Control*</u>. The case-law rendered in the field of merger control – a 1989 Regulation introduced a merger control system in the EU –clarified that the second interpretation is the right one.[220] In this new area, the Commission has been granted the power to forbid mergers creating or strengthening a "*dominant position*". And progressively, the Commission sought to develop a doctrine of collective dominance that could lead to the *ex ante* prohibition of oligopolistic mergers conducive to tacit collusion.[221] Meanwhile, the Commission showed disdain towards the doctrine of collective dominance

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*Article 85(1) of the Treaty may have effects which are incompatible with Article 86 of the Treaty. A request by a conference to be exempted from the prohibition laid down by Article 85(1) necessarily presupposes an agreement between two or more independent economic undertakings*".

[216] In contrast, intra-group relationships seem to be within the province of individual dominant positions.

[217] GC, Case T-68/89 and T-77–78/89 *Società Italiana Vetro SpA, Fabbrica Pisana SpA and PPG Vernante Pennitalia SpA v Commission*, *supra*, §358.

[218] T. Soames, "An Analysis of the Principles of Concerted Practice and Collective Dominance: A Distinction Without a Difference?", (1996) 1 *European Competition Law Rev,* 24; R. Whish and B. Sufrin, "Oligopolistic Markets and Competition Law", (1992) 12 *Yearbook of European Law,* 59.

[219] A. Jones and B. Sufrin, *EC Competition Law: Text, Cases, and Materials*, 2nd ed., Oxford University Press, Oxford, 2004, p. 683.

[220] Council Regulation (EC) No. 139/2004 of 20 January on the Control of Concentrations Between Undertakings, (2004) OJ L24/1.

[221] In this decisional practice, the Commission thus seems to consider that the notion of economic links covered oligopolistic interdependence.

under Article 102 TFEU. It used the concept sporadically, in market settings remote from oligopolistic tacit collusion.[222]

From 1992 to 1999, the Commission adopted a host of spectacular merger decisions in *Nestlé/Perrier* (clearance with remedies), *Kali und Salz* (clearance with remedies), *ABB/Daimler Benz* (clearance with remedies), *Gencor/Lonrho* (prohibition), and *Airtours v. Commission* (prohibition).[223] Those decisions were all based on the theory that the proposed concentration would create or strengthen a collective dominant position, in the form of a tacitly collusive equilibrium.

The case-law delivered in the context of annulment proceedings against those decisions clarified that the notion of collective dominance captures tacit collusion. The ruling of the Court in *France v. Commission*, was the first to say this, albeit implicitly. The Court ruled that parties may hold a collective dominant position "*because of correlative factors which*

[222] The Commission has resorted to the concept to catch a number of anomalous market configurations that fell short of conventional competition law doctrines. First, in the *Irish Sugar* case, the Commission crafted a somewhat innovative doctrine of "*vertical*" collective dominance. In this case, the Commission was attempting to put an end to a series of abuses entered into by a supplier and its distributor. The latter was under the control of the former but did not reach the case-law standard necessary to a finding of a single economic entity. Consequently, they formed two distinct economic units. Only a part of the anticompetitive practices could thus have been brought to an end pursuant to Article 101 TFEU because there remained anticompetitive practices that were purely unilateral to the distributor. These practices could not be caught under Article 102 TFEU either, because there was no evidence that the distributor held an individual dominant position. The Commission thus linked the practices of the distributor to the dominant position of the supplier by relying on the concept of collective dominance. In that situation the collective dominance concept offered a convenient device for the Commission to overcome a series of legal obstacles. *See* GC, Case T-228/97, *Irish Sugar v. Commission*, 7 October 1999, ECR [1999] II-2969. Second, in *Almelo* and *La Crespelle*, the EU courts applied the concept of collective dominance to circumvent another legal obstacle. In those cases, several firms of regional/local importance each enjoyed a dominant position on a number of distinct and narrow geographic markets. Taken one by one, the dominant position of each firm did not seem to affect "*the internal market or substantial part of it*", as requested under Article 102 TFEU. However, in close similarity with the cumulative effects doctrine under Article 101 TFEU, the Court considered that it was possible to aggregate individual dominant positions on different markets under the concept of collective dominance, so that a substantial part of the common market was affected. *See* CJEU, Case C-393/92, *Gemeente Almelo and others v. Energiebedrijf IJsselmij*, 27 April 1994 ECR [1994] I-1477; CJEU, Case C-383/93, *Centre d'insémination de la Crespelle v. Coopérative de la Mayenne*, ECR [1994] I-5077. *See* P. Nihoul et P. Rodford, *EC Electronic Communications Law*, Oxford University Press, Oxford, 2004, §3.327. Finally, a number of plaintiffs have also tried to invoke the concept of collective dominance in order to challenge national laws on the basis of Article 102 TFEU and Article 4(3) TEU. In all those cases, the ECJ dismissed the claims. See CJEU, Case C-96/94, *Centro Servizi Spediporto v. Spedizioni Marittima del Golfo*, 5 October 1995, ECR [1995] I-2883, § 34; CJEU, Case C-140/94, *DIP and others v. Comune di Bassano del Grappa and others*, 17 October 1995, ECR [1995] I-3257, §27; CJEU, Case C-70/95, *Sodemare and others v. Regione Lombardia*, 17 June 1997, ECR [1997] I-3395. For more on this, see D. Geradin, N. Petit and A-L Farrar, *EU Competition Law and Economics*, Oxford University Press, Oxford, 2011, forthcoming.

[223] Commission Decision of 22 July 1992, IV/M.190, *Nestlé/Perrier*, OJ L356, 05/12/1992; Commission Decision of 14 December 1993, IV/M.308, *Kali + Salz/MdK/Treuhand*, OJ L186, 21/07/1994; Commission Decision of 18 October 1995, IV/M.580, *ABB/Daimler-Benz*, OJ C11, 15/01/1997; Commission Decision, 24 April 1996, IV/M.619, *Gencor/Lonrho*, OJ L11 14/01/1997; Commission Decision, 22 September 1999, IV/M.1524, *Airtours/First Choice*, OJ L93, 13/04/2000.

*exist between them*".[224] But the clearest pronouncements on this issue were yet to come. In *Gencor Ltd. v. Commission* ruling, a case which concerned a 3-2 merger of two South-African suppliers of platinum metal, the GC held that:

> "*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*".[225]

A few years later, the *Airtours plc. v. Commission* judgment eliminated all outstanding (if any) ambiguities. For the first time in the history of collective dominance, the Court explicitly talked of "*tacit coordination*" in a judgment.[226] The case is also (and primarily) known for refining the evidentiary conditions required to prove collective dominance. In what will remain as one of the most striking imports ever of economic theory into EU law, paragraph 62 of the judgment subordinates the proof of collective dominance to the satisfaction of 3 conditions, *i.e.* detection, punishment and inability of current and potential competitors to undermine tacit collusion.

The above case-law was however adopted in the area of merger control. Quickly, the question arose quickly whether it could be exported into the context of Article 102 TFEU. To this day, the issue still sparks disagreement. Some argue against, insisting on the different goals of Article 102 and the EU Merger Regulation,[227] or out of consequentialist arguments.[228] Others consider that, in principle, there is no legal reason to treat the concepts of collective dominance differently under Article 102 TFEU and the EUMR.[229]

From a legal perspective, however, there are several reasons to believe that collective dominance is one and the same thing in both merger and Article 102 TFEU law. First, the

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[224] CJEU, Case C-68/94, *République française et Société commerciale des potasses et de l'azote (SCPA) et entreprise minière et chimique (EMC) v. Commission*, ECR [1998] I-1375, §211. L. Papadias, "Some Thoughts on Collective Dominance from a Lawyer's Perspective" in P. Buigues and P. Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications*, Edward Elgar, Cheltentham, 2004, p.120.

[225] GC, T-102/96 *Gencor Ltd. v. Commission*, 25 March 1999, ECR [1999] II-753, §276.

[226] GC, T-342/99, *Airtours plc. v.Commission*, 6 June 2002, ECR [2002] II-2585, §§60-62.

[227] L. Vitzilaiou and C. Lambadarios, op. cit.,*supra* note 127, p.10.

[228] See B. Hawk and M. Motta, "Oligopolies and Collective Dominance: A Solution in Search of a Problem", *Treviso Conference on Antitrust between EC Law and National Law*, 8th Ed., Fordham Law Legal Studies Research Paper No. 1301693, pp.102-103.

[229] J. Temple Lang "Oligopolies and Joint Dominance in Community Antitrust Law", in B. E. Hawk (ed.), *Fordham Corporate Law Institute*, 2000, 269, p.94.

notion of single firm dominance receives a single interpretation under both instruments. By parity of reasoning, a similar approach should prevail in relation to collective dominance. Second, the European Courts have endorsed this view. Many collective dominance "*merger*" judgments cross-reference former Article 102 TFEU rulings. And subsequent Article 102 TFEU judgments quote the "*merger*" rulings as precedents. This is particularly clear in *Compagnie Maritime Belge v. Commission*, a case that on the facts did not involve a situation of oligopolistic collusion.[230] Confirming the exportability of the merger judgments under Article 102 TFEU, the Court quoted *France v. Commission* as authority. Moreover, in this case, the Court borrowed substantive concepts from the merger case-law. With words reminiscent of the "*correlative factors*" mentioned in *France v. Commission*, the Court stated for instance, that:

> "*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*".[231]

The ruling in *Laurent Piau v. Commission* – again a case that does not deal with a situation of tacit collusion – dispelled all outstanding uncertainties.[232] Here, a football player's agent had filed a complaint with the Commission, in relation to restrictions that FIFA had placed on the exercise of his profession. The complainant argued that as an association of independent football clubs, FIFA occupied a collective dominant position. In turn, FIFA was allegedly guilty of unlawful abuse, by excluding certain football players' agents from the market. Following several modifications to the FIFA regulations, the Commission rejected the complaint.

The complainant challenged the Commission's decision before the GC. In its judgment, the GC found that the football clubs held a collective dominant position by virtue of their membership of FIFA (*i.e.*, the football clubs entertained structural links).[233] But while the GC

[230] CJEU, C-395/96 and C-396/96 P, *Compagnie Maritime Belge transports and others v. Commission*, 16 March 2000, ECR [2000] I-1365. Yet, the notion of abuse of collective dominance had been invoked, and this offered the Court an opportunity to clarify the concept.

[231] Implicit in the Court's ruling is thus the view that Article 102 TFEU harbors tacit collusion.

[232] GC, T-193/02, *Laurent Piau v. Commission*, 26 January 2005, ECR [2005] II-209, §111. Some authors nonetheless challenge the relevance of *Piau* as a precedent to the principle that collective dominance applies to tacit collusion. *See* F. Mezzanote, "Tacit Collusion as Economic Links in Article 82 EC Revisited, (2009) 3 *European Competition Law Review*, 137.

[233] GC, T-193/02, *Laurent Piau v. Commission*, *supra* note 232, §113-114. The membership imposes on football clubs certain regulatory obligations. Note that the membership of FIFA was here indirect, through the participation in national football associations.

could arguably have confined its reasoning to this sole finding, it proceeded to add, citing expressly the *Airtours* merger case-law, that:

> "*Three cumulative conditions must be met for a finding of collective dominance: 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; second, 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; thirdly, the foreseeable reaction of current and future competitors, as well as of consumers, must not jeopardise the results expected from the common policy*".[234]

The presence of explicit references to "*oligopoly*" and "*tacit coordination*" makes indisputably clear that the concept of collective dominance under Article 102 TFEU covers situations of tacit collusion.[235] This case-law will be subsequently followed, and validated by the CJEU in *Bertelsmann AG v. Impala*.[236] Moreover in the recent *EFIM v. Commission* case, the GC repeated again that a collective dominant position under Article 102 TFEU covered situations of "*tacit coordination*".[237] Interestingly, the Court made no reference to the notions of "*collective entity*", "*correlation factors*" or "*economic links*" used in previous cases.

*3.* <u>*Enduring Enforcement Disinterest in Tacit Collusion under Article 102 TFEU*</u>. Since the adoption of the EUMR, the Commission has shown a distinct level of disinterest in collective dominance under Article 102 TFEU. The Commission has trust in its own ability to prevent tacit collusion situations under Regulation 139/2004,[238] or in the context of sector-specific regulatory frameworks.[239] As a result, the Commission has been extremely loath to start Article 102 TFEU proceedings on grounds of collective dominance.

In addition, among the few collective dominance decisions adopted by the Commission, there has so far been no Article 102 TFEU case where tacit collusion was held to constitute a sufficient connecting element required for a collective dominant position.[240] In most cases,

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234 *Idem*, §111

235 The case was appealed before the CJEU, but the judgment did not give rise to any discussion of the concept of collective dominance.

236 CJEU, C-413/06 P, *Bertelsmann AG v. Impala*, 10 July 2008, [2008] ECR II-4951. See on this, F. Mezzanotte, "Interpreting the Boundaries of Collective Dominance in Article 102 TFEU", (2010) (21) 4 *European Business Law Review*, 519-537.

237 GC, T-296/09, *EFIM v. Commission*, 24 November 2011, not yet reported, §§73 and 75. It also recalled that establishing a collective dominant position hinged on proof of (i) detection opportunities; (ii) retaliation mechanisms; and (iii) absence of countervailing power of actual and potential rivals.

238 N. Petit and D. Henry, "Why the EUMR should not enjoy a monopoly over tacit collusion" in OCCP (ed), *Changes in Competition Policy over the last two decades*, Anniversary Publication (Office of Competition and Consumer Protection), 2010, 181.

239 L. Papadias, op. cit., *supra* note 224,

240 H. Haupt, "Collective Dominance under Article 82 EC and EC Merger Control in the Light of the *Airtours* Judgment", (2002) 9 *European Competition Law Review*, 434, p.438; M. Clough, "Collective Dominance – The

the Commission was able to adduce evidence of close links between the companies. The Commission's reliance on collective dominance might be explained by attempts to circumvent Article 101(3) TFEU exemptions or exonerations from fines.[241]

In the debates leading to the adoption of the 2005 Discussion Paper on the application of Article 82 of the Treaty to exclusionary abuses (the "Discussion Paper") and of the 2009 Guidance on enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct (the "Guidance Paper"),[242] several stakeholders urged the Commission to clarify whether it intended to enforce Article 102 TFEU where there were only connecting factors in the form of tacit collusion (or pure oligopolistic interdependence).[243]

Faced with a new stream of Article 102 TFEU rulings (in particular in *Laurent Piau v. Commission*), the Commission had little other choice than to say something on the issue. In 2005, it expressly confirmed in its Discussion Paper that collective dominance could apply outside of "*the existence of an agreement or of other links in law*" and that a finding of collective dominance could "*be based on other connecting factors and depends on an economic assessment and, in particular, on an assessment of the structure of the market in question*".[244] It also provided guidance on the conditions necessary for the purposes of establishing collective dominance. Even more remarkably, the Commission alluded for the first time to the notion of *abuse* of collective dominance, indicating that such abuses were typically collective, rather than individual.[245] Whilst the Discussion Paper's clarifications remained limited in substance, they marked a welcome evolution in terms of legal certainty.

In 2009, however, the Commission endorsed a more conservative approach, which still represents the current EU enforcement paradigm. With the release of the Guidance Paper, the

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Contribution of the Community Courts", in M. Hoskins and W. Robinson (ed.), *Essays for Judge David Edwards*, Hart Publishing, Oxford, 2003.

241 T. Soames, *op. cit.*, *supra* note 218.

242 DG COMP Discussion Paper on the application of Article 82 of the Treaty to exclusionary abuses, December 2005; Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, December 2008, OJ C 45, 2009.

243 D. Geradin et al, "The Concept of Dominance in EC Competition Law", Research Papers on the Modernization of Article 82 EC, Global Competition Law Center, July 2005, p.34. This would have additionally provided useful guidance to Member States competition authorities and courts which might (have) engage(d) in action against anticompetitive oligopolies on the basis of Article 102-like provisions (e.g., the UK complex monopoly investigations).

244 Discussion Paper, *supra* note 241, §46.

245 *Idem,* §74. Yet, the Commission did not exclude the possibility of finding individual abuses of a collective dominant position.

Commission expressed a clear disinterest in the enforcement of Article 102 TFEU in tacitly collusive oligopolies. Whilst the Guidance Paper confirmed the theoretical applicability of the concept of collective dominance,[246] it focuses on situations of "*single dominant position*" as a matter of enforcement priority.

To be sure, the Guidance Paper does not bind National Competition Authorities ("NCAs"). They remain indeed free to run abuse of collective dominance cases under Article 102 TFEU and/or national law. In addition, they can, under Article 3(2) of Regulation 1/2003, adopt and apply "*on their territory stricter national laws which prohibit or sanction unilateral conduct engaged in by undertakings*" including, arguably, the unilateral conduct of collectively dominant firms.[247]

Of course, this may give rise to a certain degree of enforcement of Article 102 TFEU in collectively dominant oligopolies. And in fact, recent studies suggest that NCAs have appeared less reluctant than the Commission to apply Article 102 TFEU to oligopolies.[248] That said, the vast majority of national collective dominance cases are merger cases (2/3). In contrast, only a fraction of them are abuse of dominance cases (1/3).[249]

### D. *The EUMR, "Coordinated Effects" and the Structural Prevention of Tacit Collusion*

*1.* *Tacit Collusion and EU Merger Policy*. As hinted previously, the EUMR is the preferred, if not sole, legal tool used by the Commission to address the oligopoly problem.[250] In practice, the Commission probes risks of tacit collusion in most oligopolistic merger cases.

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[246] Guidance Paper, *supra* note 241, §4: "*Article 82 applies to undertakings which hold a dominant position on one or more relevant markets. Such a position may be held by one undertaking (single dominance) or by two or more undertakings (collective dominance). This document only relates to abuses committed by an undertaking holding a single dominant position*".

[247] Article 3(2) of Council Regulation 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, OJ C L 1, 4 January 2003.

[248] B. Hawk and Motta, op. cit., *supra* note 228 p.104.

[249] N. Petit and N. Neyrinck, "Collective dominance: An overview of national case law", *e-Competitions*, N° 39129, October 2011, available at www.concurrences.com. This paper reviews a dataset of domestic case law chronicles, extracted from the online journal *e-Competitions.* The cases have been retrieved through a keywords search, based on the terms "*collective dominance*" and "*coordinated effects*". In total, thirty-nine decisions have been listed as relevant for the purpose of the study. Amongst those decisions, the vast majority of domestic collective dominance cases are merger cases. More than two-third (68%) of the cases of the dataset have been dealt with under the merger control rules. Only one third of them (32%) have been dealt with under Article 102 TFEU.

[250] See in this regard N. Petit, *Oligopoles, collusion tacite et droit communautaire de la concurrence*, Bruylant-LGDJ, Brussels, 2007; B. Hawk and G. Motta, "Oligopolies and Collective Dominance: A Solution in Search of a Problem", in E. Raffaelli (ed.), *Antitrust between EC Law and National Law*, Bruylant, 2008, p.65.

This is true of both horizontal mergers (mergers between competitors) and non-horizontal mergers (mergers between non-competitors, *i.e.* vertical and conglomerate mergers).[251]

The EU "*merger control-only*" policy against tacit collusion is predicated on two widespread beliefs. First, the EUMR would enshrine a silver-bullet "*preventive*" remedy against tacit collusion. Pursuant to the EUMR, all contemplated mergers with a "*Community dimension*" are indeed suspended and must be approved by the Commission.[252] The Commission would thus be able to prevent structural market changes likely to create/exacerbate situations of tacit collusion. And this preventive approach is widely perceived as superior to the corrective enforcement of Articles 101 and 102 TFEU. As one former official once said, it is « *always better to put care before cure* ».[253]

Second, the EUMR would offer the advantage of bringing a "*structural*" solution to tacit collusion. Many competition lawyers indeed view tacit collusion as the by-product of excessive market concentration. Given the EUMR's vocation to address problems related to concentrated market structures, it is deemed an adequate instrument against tacit collusion. Moreover, from a practical standpoint, structural remedies are easier to apply under the EUMR,[254] than under Article 101 and 102 TFEU where they can only be ordered in exceptional circumstances.[255]

2. <u>*From Collective Dominance to "Coordinated Effects*"</u>. In the first versions of the EUMR, the Commission could only declare incompatible concentrations which "*create[d] or strengthen[ed] a dominant position*".[256] The notion of dominance – and its offshoot "*collective dominance*" – was thus central to the analysis.

With the adoption of a new Regulation in 2004, the substantive test changed. Pursuant to the revised Article 2(3) of the EUMR, the Commission can declare incompatible any

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[251] The former are however more prone to raising tacit collusion concerns.

[252] In brief, mergers with an EU-wide impact.

[253] G. Drauz, "Collective Dominance/Oligopoly Behaviour under Articles 81/82 and the EC Merger Regulation", in B. Hawk (ed.), *Fordham Corporate Law Institute*, 2002, 380.

[254] They are "*preferable*" to other remedies, according to the General Court. *See* GC, T-102/96, *Gencor v Commission, supra* note 225, §319.

[255] Article 7 of Regulation 1/2003, *supra* which states that "*Structural remedies can only be imposed either where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the undertaking concerned than the structural remedy*").

[256] See Article 2(3) of Council Regulation 4064/89 of 21 December 1989 on the control of concentrations between undertakings, OJ L 395, 30 December 1989.

"*concentration which would significantly impede effective competition, in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position*" (emphasis added). The concept of "*significant impediment to effective competition*" ("SIEC") has therefore supplanted the concept of "*dominance*", which has become merely illustrative. Interestingly, this new wording has also prompted a change in the concepts used in tacit collusion cases.[257] Since the new Regulation, Commission decisions now talk generally of "*coordinated effects*", and only refer sporadically to "*collective dominance*".[258]

Those changes are not only of semantic nature. They reflect a sophistication of the Commission's analytical framework of oligopolistic mergers. Before *Airtours*, the Commission fully embraced the checklist approach. This approach had often been criticized as overly impressionistic and arbitrary. In practice, it sufficed for the Commission to verify the existence of a grab bag of + factors (in a proportion superior to – factors ) to reach a finding of collective dominance (collective dominance = + factors > – factors).[259] In addition, Commission decisions often referred to a risk of collective dominant positions in the abstract, without taking a stance on the concrete scenario of collusive conduct likely to arise *ex post* merger (*e.g.*, collusion on price, output, investments, etc.).

With the revision of the EUMR, the checklist approach belongs to history. Building on the *Airtours* judgment, the Guidelines on Horizontal Mergers,[260] and later the Guidelines on non-

[257] The main practical consequence of this new wording has been to enlarge the scope of the EUMR to situations of unilateral market power below dominance (referred to as "*unilateral effects*"). Mergers leading to the creation of a big n°2 or n°3 firm can now be prohibited.

[258] This is also true of soft law instruments.

[259] *See* A. R. Dick, "Coordinated Interaction: Pre-merger Constraints and Post-merger Effects", (2003) 12 *George Mason Law Review*, 65, pp.67-68: "[...] *Early antitrust analysis implemented a "checklist" approach that sought to link sellers' propensity to collude to an assortment of market factors. In many cases, the checklist approach devolved into a subjective inquiry that involved first counting market factors on the plus and minus sides of the coordination ledger and then applying a subjective (and unstated) weighting scheme to deduce whether market conditions were sufficiently conducive to collusion to raise antitrust concerns*".

[260] Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 31, 5 February 2004, p. 5, §39: "*In some markets the structure may be such that firms would consider it possible, economically rational, and hence preferable, to adopt on a sustainable basis a course of action on the market aimed at selling at increased prices. A merger in a concentrated market may significantly impede effective competition, through the creation or the strengthening of a collective dominant position, because it increases the likelihood that firms are able to coordinate their behaviour in this way and raise prices, even without entering into an agreement or resorting to a concerted practice within the meaning of Article 81 of the Treaty. A merger may also make coordination easier, more stable or more effective for firms that were already coordinating before the merger either by making the coordination more robust or by permitting firms to coordinate on even higher prices*".

Horizontal Mergers,[261] have introduced a modern analytical framework that assesses changes in the oligopolists' behavioral incentives, in lieu of focusing primarily on market features. From an evidentiary standpoint, this "*increasingly conduct-related analytical approach*" has two facets.[262] First, the Commission can no longer superficially hint at an indeterminate risk of collective dominance. From the very outset, the Commission must now "*frame*" the case, through the selection of one (or more) concrete coordinated effects scenario(s).[263] The formulation of the theory of harm must be based on sound economic theory, following a preliminary review of market characteristics.[264] In *Air Liquide/Messer Targets*, for instance, the Commission's was concerned by the risk of customer sharing following the finding that there had been a former similar agreement amongst industrial gas producers.[265]

But this is not all. The second step of the Commission's analysis entails testing the theory of harm, *i.e.,* assessing whether the selected scenario(s) of coordinated effects is (are) plausible. On this particular issue, the Commission now applies a demanding test that goes beyond the checklist approach. To be sure, the Commission does still scrutinize market features. But it no longer suffices to pile up a list of + factors, longer than the list of – factors. The Commission must now test the effects of the market features on each of the four cumulative conditions C1, C2, C3 and C4 outlined above and imported at §41 the Guidelines, namely that (i) oligopolists share a "*common understanding*" of the terms of coordination (C1); (ii) oligopolists can "*monitor to a sufficient degree whether the terms of coordination are being adhered to*" (C2); (iii) there is a "*credible deterrent mechanism that can be activated if deviation is detected*" (C3); and (iv) the "*reactions of outsiders, such as current and future competitors not participating in the coordination, as well as customers, should not be able to jeopardise the results expected from the coordination*" (C4).[266]

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[261] Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18/10/2008.

[262] H. Haupt, op.cit, supra note 239, p.444.

[263] L.-H. Röller, "Economic Analysis and Competition Policy Enforcement in Europe", in *Modelling European Mergers: Theory, Competition and Case Studies*, Edward Elgar, Cheltentham, 2005, pp.16-17: "*Economic theory is necessary to "frame" a case, which in turn is fundamental to arrive at a particular theory of harm. [...]. The goal of a plausible theoretical framework in the context of a particular case is to come up with testable hypothesis concerning the theory harm*".

[264] In this context, the Guidelines provide that coordination may take very many forms, from price increase to output reductions, capacity limitations, market partitioning, etc. *See* Guidelines on the assessment of horizontal mergers under the Council Regulation, *supra* §40.

[265] Commission Decision, 15 March 2004, IV/M.3314, *Air Liquide/Messer Targets*, OJ C 91, 15/04/2004, p.7.

[266] Guidelines on the assessment of horizontal mergers, *supra* §41.

*Coordinated effects scenario [C1(+ and – factors) + C2 ((+ and – factors) + C3((+ and – factors) + C4 (+ and – factors)]*

The new standard considerably reduces risks of misguided decisions. It places the Commission under a heavy burden of proof. In the past, the Commission could find a situation of collective dominance despite the existence of one (or more) minus factors, simply by adducing a larger number of + factors. This is no longer possible. Given the cumulative nature of C1, C2, C3 and C4, if one (or more) – factor(s) undermine(s) one (or more) of the 4 conditions, then the Commission cannot reach a finding coordinated effects.[267] As a result, early observers of the new approach anticipated a marginalization of coordinated effects analysis in merger enforcement.[268]

*3. Track Record of the Commission in Coordinated Effects cases.* There is empirical evidence in the case-law that the EUMR enjoys a jurisdictional monopoly over tacit collusion. Since the entry into force of the EUMR, the number of Commission decisions reviewing risks of coordinated effects lies in the region of 270.[269] In contrast, Article 102 TFEU has never been applied to tacitly collusive oligopolies.

At a higher level of granularity, our dataset of 270 merger decisions shows that coordinated effects concerns appear substantiated in only a fraction of cases. Since 1989, the Commission has applied remedies/prohibited concentrations on grounds of coordinated effects concerns in 38 decisions (see Annex I).[270] 20 of those decisions are Article 6(1)b) decisions (Phase I

[267] Moreover, as explained previously, the analysis is rendered even trickier by the fact that some market features act as + factors on some of the 4 conditions, but as – factors on others.

[268] S. Baxter and F. Dethmers, "Collective Dominance under EC Merger Control – After Airtours and the Introduction of Unilateral Effects is there Still a Future for Collective Dominance?", (2006) 27(3) *European Competition Law Review*, 148; K.-U. Kühn, "Closing Pandora's Box? Joint Dominance after the Airtours Judgment", in *The Pros and Cons of Merger Control*, The Swedish Competition Authority, Stockholm, 2002, p.54.; M. Pflanz, "Oracle/PeopleSoft: The Economics of the EC Review", (2005) 3 *European Competition Law Review*, 123.

[269] In our 2007 study on oligopoly, we had found 127 EUMR decisions testing risks of tacit collusion between 21 September 1990 and 6 June 2006. *See* N. Petit, op. cit, *supra* note 249, at Chapter III. To this list, 3 decisions that had not been previously identified must be added (cases COMP/M.3975, COMP/M.3350, COMP/M.3868). Between 6 June 2006 and 3 October 2011, we have retrieved 140 decisions testing risks of coordinated effects, thanks to a search in the decisions published on the Commission's website (published in English, French and German): http://ec.europa.eu/competition. In the text of the decisions, we have searched the keywords coordination, tacit, coordinated, collective dominance, joint dominance.

[270] This figure is based on an update of the list found in N. Petit, "Remedies for Coordinated Effects under the EU Merger Regulation", *Competition Law International*, International Bar Association, September 2010, N° 6/2, pp. 29-37, which includes the Commission Decision of 14 March 2006, COMP/M.3868, *Dong/Elsam/Energi E2*, OJ L133, 25/05/2007. It leaves aside cases where the parties spontaneously amended their transaction during the review process to eliminate from the outset any possible Commission concerns. *See*, for instance, Commission Decision of 26 January 2001, COMP M.2569, *Interbrew/Beck's*, OJ C320 15/11/2001. These decisions can be found on DG COMP's website. It also excludes transactions that have been abandoned by the parties, for fear of

conditional clearance). 15 are Article 8(2) decisions (Phase II conditional clearance). 3 are Article 8(3) incompatibility decisions. Interestingly, all those transactions involve "*horizontal*" mergers,[271] between existing or potential competitors.[272] By contrast, no pure "*vertical*" merger has ever given rise to tacit collusion concerns.

Focusing on the specific theories of coordinated effects ran by the Commission in those 38 cases, 32 of those cases concerned the emergence of a dominant duopoly following a 3-2 merger. 30 cases concerned the green field emergence of coordinated effects amongst firms that were previously not coordinating their conduct (a situation previously known as the "*creation of a collective dominant position*". In 8 cases, the Commission suspected that the merger would make coordination easier amongst firms that had been already been coordinating their conduct (a situation in the past known as a "*strengthening of a collective dominant position*").[273] Finally, in 6 of those decisions, the Commission ran in parallel a theory of anticompetitive unilateral effects.[274]

### *E. Conclusion – The Merger-only Enforcement Paradigm*

In EU law, tacit collusion is addressed under a full *ex ante* approach, through the application of merger rules. From an economic standpoint, this approach seeks to *prevent* changes in the market structure that may create or strengthen tacit collusion.

In contrast, *ex post* enforcement against tacit collusion remains embryonic. From an economic standpoint, little is done to *correct* existing situations of tacit collusion. Article 101 TFEU does not illegalize tacit collusion in itself, and firms are simply called upon to avoid *ex ante* agreements that facilitate tacit collusion. However, there is almost no *ex post* enforcement against such facilitating practices. And whilst Article 102 TFEU in theory

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a prohibition decision. *See* Commission Press Release, "Alcan abandons its plans to acquire Pechiney to avoid the prospect of a decision by the European Commission to block the merger", IP/00/258, 14/03/2000.

[271] We use here the term merger in a large, generic sense to include JVs and other types of transactions.

[272] Even if in some cases, the horizontal overlaps between the parties' activities were not significant. *See*, for instance, Commission Decision of 26 September 2001, M.2434 *Grupo Villar Mir/EnBW/Hidroeléctrica del cantabrico*, OJ L48 Of 18/02/2004, §§28-29 and Commission Decision of 19 March 2002, *EnBW/EDP/Cajastur/Hidrocantabrico*, OJ C114, 15/05/2002, §28-29. Some of those mergers also involved vertical issues. *See* Annex I.

[273] In those cases, the Commission referred to the strengthening of a collective dominant position or of coordinated effects. Occasionally, it alluded to the "*creation and strengthening*" of such dynamics.

[274] In parallel to the coordinated effects theory of harm on a similar relevant market. Those cases are, however, anomalies, as in principle, theories of coordinated and unilateral effects are incompatible. *See* D. Neven, "First impressions on the Revised EU and UK Merger Guidelines", GRC Conference, 29 September 2010, Brussels, observing that "*Unilateral and coordinated effects can be considered simultaneously in probabilistic terms. But either one's understanding of competition in the market correspond to a unilateral effect story or a coordinated effect story. Arguing both at the same time is bound to involve contradictions in the competitive assessment*".

catches tacitly collusive oligopolies, and could possibly play a role, the type of conduct that may be prohibited under this provision remains mysterious, given the Commission's disinterest in the instrument.

This enforcement paradigm has few opponents. Understandably, most EU practitioners support it, likely because merger proceedings are predictable, timely and do not give rise to penalties.[275] In contrast, EU practitioners generally eschew the idea of applying Article 101 and 102 TFEU to tacit collusion. Such investigations are arguably perceived as unpredictable, protracted, disruptive and may give rise to heavy penalties and/or regulatory takings which harm the interests of their clients.

## V. Beyond Merger Law?

This section ventures whether the EU's merger-only enforcement paradigm should be revisited. It identifies two lines of arguments that call into question the mainstream view that tacit collusion should be exclusively addressed under the merger rules.

### *A. First-order Reasons – Intrinsic Limitations of Merger Rules*

*1.* <u>*Scope Issues.*</u> On close analysis, the EUMR provides a feeble check against tacit collusion. Many oligopolistic markets likely to harbor tacit collusion dynamics are indeed out of the reach of the application of the EUMR. This is first true of all those stable oligopolies where no mergers take place.[276] In times of economic hardship, for instance, oligopolists may not contemplate mergers for long periods of time, simply because access to capital is limited. This is all the more unfortunate, given that economic theory teaches that the more stable an oligopoly, the greater the risks that tacit collusion unravels. As long as no merger occurs in such markets, the Commission remains powerless to address the anticompetitive harm inflicted by oligopolists on their trading parties.

Second, and quite paradoxically, the EUMR cannot prevent the apparition of tacit collusion on existing duopolistic markets, which are the worst market structures in so far as tacit collusion is concerned. Duopolists indeed know that merger to monopoly is no option under

[275] J. Temple Lang, op. cit., *supra* note 229; B. Hawk and G. Motta, op. cit, *supra* note 228, pp.103-104.
[276] In times of economic crisis, access to capital is limited and M&A activity is generally weak.

the EUMR.[277] Hence, on those markets, the trigger that enables the Commission to scrutinize tacit collusion concerns is wholly defused. In turn, absent Article 101 and 102 TFEU enforcement in this field, duopolists can sustain tacit collusion over time without ever facing competition exposure. Tacitly collusive duopolies can thus be said to enjoy a quasi-antitrust immunity in EU competition law.

Third, besides external growth strategies, internal growth strategies, which fall short of the EUMR, may increase oligopolistic concentration and, with it, tacit collusion.[278] In the competitive process, efficient firms lure customers away from inefficient ones. To serve those customers, efficient firms must expand their production scale through internal investments. Meanwhile, less efficient firms are forced out from the market. Eventually, a tighter market structure emerges, where firms may be more prone to tacit collusion. In *MCI/WorldCom/Sprint*, the Commission actually acknowledged this issue. It noted that a collective dominant position may have been created by the exit of several operators prior to the notified merger.[279]

Fourth, given that the EUMR only apprehends oligopolistic concentration through mergers, it is wholly ineffective to combating oligopolisation dynamics triggered by market opening reforms in network industries (telecommunications, electricity, gas, postal services, etc.). In many of those sectors, oligopolies have replaced monopolies, and risks of tacit collusion are conceivable.[280] However, the EUMR has little, if no grip on them.

Finally, oligopolists that tacitly collude can bypass the EUMR by playing "*cat and mouse*" with the Commission.[281] Oligopolists that coordinate their conduct may well reach the parallel, implicit understanding that no merger should take place, to avoid providing competition agencies with an opportunity to change the dynamics of their interaction.

[277] In recent years, the Commission has indeed applied a strict prohibition approach in 2-1 mergers. *See*, for instance, Commission Decision, COMP/M.5830, *Olympic/Aegean Airlines*, 26/01/2011, not yet published; Commission Decision, COMP/M.6166, Deutsche Börse/NYSE Euronext, 29/06/2012, not yet published.

[278] J. Steindl, *Maturity and Stagnation in American Capitalism*, Monthly Review Press, New York, 1976. In real-life markets, sectors such as retail distribution, tires, or business software have experienced a significant level of oligopolistic concentration through internal growth.

[279] Commission Decision of 28 June 2000, COMP/M.1741, *MCI/Worldcom/Sprint*, OJ L300, 18/11/2003.

[280] That said, however, the existence of sector specific regulatory framework with intrusive remedies may bring an appropriate *ex post* response to tacit collusion issues.

[281] On the concept of "*cat and mouse*" games in competition law, *see* M-P. Schinkel, "Market Oversight Games", Working Paper No. 2010-11, Amsterdam Center for Law & Economics, 15 October 2010.

Given those five blind spots, situations of tacit collusion may endure for a significant period of time without ever being disrupted by the applicability of the EUMR. Absent any *ex post* enforcement policy, such market failures benefit from a state of provisional immunity. Economists refer to this as a Type II error (false acquittals).

*2.* *<u>Substantive issues</u>.* As mentioned above, oligopoly theory has little predictive value. For both informational and theoretical reasons, competition agencies are thus unlikely ever to make robust predictions on the likelihood of tacit collusion post-merger. Moreover, in the current state of competition policy, quantitative techniques remain unchartered territory. In the context of the review of the *ABF/GBI Business*,[282] the Commission's Chief Economist Team undertook some quantitative work. Yet, most of the analysis was inconclusive, and was not taken over in the decision.[283] Given all this, a theoretical risk of both Type I (false conviction) and Type II errors cannot be excluded.

In current practice, the track record of the Commission suggests that the risk of Type II errors is higher than the risk of Type I errors. There are indeed signs of a marginalization of coordinated effects analysis under the EUMR, possibly because of the heightened burden of proof bearing on the Commission, plus its plausible reluctance to engage in crystal ball gazing. Since 2001, the Commission has not vetoed a merger on grounds of collective dominance.[284] Moreover, the number of cases where remedies have been applied is steadily decreasing.[285]

*3.* *<u>Procedural issues</u>.* Mergers raising tacit collusion concerns are heavy cases. Because a situation of collective dominance concerns most, if not all, players on the relevant market, the Commission cannot confine its assessment to the merging parties, but must undertake a wider market investigation. In particular, it must collect almost as much information on the parties' rivals as on the merging firms themselves, including information on costs, pricing strategies, business plans, investments, etc.[286] Collective dominance cases thus come close to a "*sector inquiry*". However, unlike in *ex post* sector inquiries under Article 101 and 102

[282] Commission decision of 23 September 2008, COMP/M.4980 – *ABF/GBI Business*, not yet published. A. Amelio, P. Asbo, M. de la Mano, R. Maximiano and V. Porubsky, "ABF/GBI Business: coordinated effects baked again", *Competition Policy Newsletter*, 2009-1.
[283] We are thankful to M. de la Mano for providing us information on this.
[284] In Commission Decision of 31 January 2001, COMP M/2097, *SCA/Metsä Tissue*, OJ L57, 27 February 2002.
[285] *See* Annex I. There was just one coordinated effects case in 2009, and none in 2010 and 2011.
[286] And this information is not (and cannot) be provided in the notification form.

TFEU,[287] EUMR proceedings must be carried out within tight time limits (in principle 90 days).

Moreover, merger proceedings are generally bilateral in nature. They involve primarily negotiations between the Commission and the merging parties. Of course, the Commission has the power to request input from the merging parties' competitors. But here, a risk of adverse selection arises. Where a merger actually risks facilitating tacit collusion, rival oligopolists may have incentives to submit only evidence supportive of the merger, and to conceal – or even forge – unsupportive evidence.

Those procedural specificities give credence to the view that the Commission may fail to identify all risks of tacit collusion in horizontal mergers. Again, a risk of Type II error cannot be excluded.

*4.* <u>*Remedial Issues*</u>. Three types of remedies are generally ordered in mergers leading to tacit collusion.[288] First, some remedies seek to create or restore "*competitive forces*" external to the oligopoly (hereafter, "type I remedies").[289] Such remedies typically purport to establish a new market entrant or to strengthen an existing competitor. Second, other remedies seek to sever structural links within the oligopoly (hereafter, "type II remedies"). In essence, those remedies intend to eradicate collaborative opportunities between incumbent oligopolists. Finally, a third set of remedies seeks to eliminate facilitating practices, i.e. business conduct which facilitates tacit collusion (hereafter, "type III remedies").

Each of those types of remedies has shortcomings. First, type I remedies, and in particular divestitures, generally entail commercial discussions between the merging parties and the prospective buyer, and may thus facilitate risks of collusion. Moreover, type I remedies are inappropriate in mergers leading to the creation of an asymmetric oligopoly, where the predicted collusive outcome takes the form of price leadership.[290] Whilst a type I remedy may reduce the merging parties' market share – and thus reduce risks of oligopolistic price leadership – it may concomitantly increase the overall symmetry of market shares within the

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[287] *Ex post* sector inquiries are regulated under Article 17 of Regulation 1/2003, *supra*.

[288] For a complete overview, see N. Petit, "Remedies for Coordinated Effects under the EU Merger Regulation", *op.cit, supra* note 269. A remedy is a modification of a proposed concentration, which the merging parties commit to implementing with a view to dispelling the Commission's "*serious doubts*" regarding their purported transaction (so that they might, ultimately, benefit from a clearance decision).

[289] The concept of "*competitive force*" is borrowed from DG Competition, European Commission, Merger Remedies Study, Public version, October 2005, available at http://ec.europa.eu/comm/competition.

[290] In such a setting, one firm – the one with high market shares – "*leads*" the market (*i.e.*, it sets the prices), and the others follow.

entire oligopoly. In such cases, a divestiture to a third party will simply change the nature of collusion on the market.[291]

Second, type II remedies are complex to enforce. The severance of structural links between the merged entity and rival oligopolists is indeed contingent on the acquiescence of the latter. And parties offering for instance to withdraw from a joint venture will often need to secure prior approval from their contractual partner.[292] In a situation of this kind, the Commission is powerless. Its enforcement powers under the EUMR can only target the "*undertakings concerned*", *i.e.* those participating in the concentration. The Commission thus cannot request third parties to assist the merging parties in severing commercial, industrial, and other financial links.

Third, a serious shortcoming of type III remedies is their relatively narrow scope. For obvious reasons, the merging parties can only commit to eliminate their *own* facilitating practices. In contrast, the parties have no influence over similar rival oligopolists' practices which may facilitate tacit collusion. Further, type III remedies fail to catch a slew of other facilitating practices, which are not under the merging parties' control, *i.e.* those adopted by public institutions, customers and other industry stakeholders.

*5.* <u>*Public Policy Implications*</u>. The merger-only treatment of tacit collusion has several underestimated shortcomings. In particular, a generalized risk of type II errors and, in turn, of under-enforcement cannot be excluded, with competition authorities failing to control oligopolies prone to tacit collusion dynamics.[293] In plain and simple words, the EUMR is unlikely to ever prevent tacit collusion on oligopolistic markets.

As will be seen below, the main public policy implication of this is that in addition to the application of the merger rules, other instruments should also be applied to correct tacitly collusive markets that (i) have been wholly left unchecked by the EUMR; or (ii) arise out of pro-collusive mergers that were erroneously authorized under the EUMR.

### *B. Second-order Reasons – Side effects of Anticartel Policies under Article 101 TFEU*

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[291] This risk is far from hypothetical. It occurred in the *Alcan/Pechiney* merger. *See* Commission Press Release, IP/00/258, *supra* (where the Commission noted that the proposed divestiture "*would increase the already extremely high concentration of the European aluminum industry*").

[292] Article 8(2) of the EUMR, *supra*.

[293] Of course, some of those errors can be corrected subsequently through the judicial review system. But this is only the case if a misguided decision has been adopted. In contrast, absent a decision (in the case of the "scope" issues described above), the error remains.

Developments in other areas of EU competition law also militate in favor of entrusting competition agencies with additional remedies against tacit collusion.

*1.* <u>*Avoidance Strategies*</u>. Over the past 20 years, explicit collusion has been heralded as the public enemy n°1 of competition authorities in the world. Accordingly, agencies have adopted new, innovative techniques to detect, investigate and sanction collusive arrangements. The most salient illustrations of this are the proliferation of leniency programmes across the world, and the dramatic escalation of penalties inflicted in explicit collusion cases.

In our view, the drastic toughening of anticartel policies across the world may incidentally spur tacit collusion on oligopolistic markets, in particular when market players are not risk averse. This hypothesis – which we concede remains untested – draws on the work of Prof. Schinkel in a recent paper on "*Market Oversight Games*".[294] According to Schinkel, market players try to avoid the competitive pressure imposed on them that the regulators are working to keep up. In this context, market players engage in avoidance strategies, and find creative ways to achieve anticompetitive outcomes short of a conventional competition law infringement. For instance, faced with increased penalties for cartel infringements, oligopolists willing to jointly achieve supra competitive profits may resort to loose communication techniques that fall short of Article 101 TFEU, such as unilateral signaling through the press, radio, etc. Business management books are in fact replete with examples of such strategies. In the *Atlantic Sugar* case, for instance, one firm posted its prices in the lobby of its headquarters, so rivals could see them.[295] Oligopolists may also resort to other strategies such as "*hub and spoke*" communications through intermediaries, customers, agents, etc.

In such cases, Schinkel argues that "*competition authorities need the space to develop and apply novel theories of harm to pursue continuously changing evasion strategies as potential violations of the competition rules*".[296] Concretely, this implies that agencies confronted with new breeds of anticompetitive practices should have the power to adjust accordingly the boundaries of the law to craft new remedies.

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[294] M-P. Schinkel, *op. cit.*, *supra* note 280.
[295] *See* E. M. Iacobucci and R. A. Winter, "Abuse of Joint Dominance in Canadian Competition Policy", (2010) 60 *University of Toronto Law Journal*, 219, p.228.
[296] M-P. Schinkel, op. cit., *supra* note 280, p.22.

2. <u>Compliance Strategies</u>. Conversely, with the success of anticartel policies, oligopolists, in particular risk-averse ones, may be incentivized to report – through leniency applications, for instance – loose forms of collusion that fall short of the Article 101 TFEU prohibition.[297] For instance, an oligopolist may report to a competition agency a situation of tacit collusion through unilateral signaling. If this risk was ever to become material, competition agencies may be increasingly exposed to tacit collusion allegations. In such cases, it is not "*good*" administrative practice for the agency to turn a blind eye to the issue on the ground that Article 101 TFEU is inapplicable (or that Article 102 TFEU was never enforced in such settings). Ideally again, a remedy should be available to tackle such market failures.[298]

## VI. Additional Remedies?

Given the costs and errors associated with the EU merger-only enforcement system against tacit collusion, the question arises whether other remedies should be introduced in the EU competition enforcement mix, in particular to correct Type II errors. In the literature, several authors have supported the adoption of novel, *sui generis* remedies (A). However, given their lack of practicability, most scholars have reflected on a more creative utilization of the existing toolbox, *i.e.* Article 101 and 102 TFEU. Under Article 101 TFEU, the basic applicability issues have been surmounted and discussions now focus primarily on scope and adequacy (B). In contrast, the applicability of Article 102 TFEU remains a bone of contention, with scholarly proposals running in all directions (C).

### *A. Sui Generis Remedies*

Now and again, competition scholars have toiled with the idea of devising *sui generis* remedies to address tacit collusion. Whish and Sufrin, wary that the notion of abuse of collective dominance could lead to fines on tacitly collusive oligopolists, have advised to move away from the application of punitive remedies, in favor of an approach which draws

[297] B. Hawk and G. Motta, op. cit., *supra* note 228, p.103 actually argue that this will narrow the tacit collusion gap.

[298] In the present state of EU competition law, the competition agency could seek to eliminate facilitating practices that fall foul of Article 101 TFEU, provided there are such practices.

inspiration from the UK market investigations regime.[299] Those are expert investigations into a sector of the economy, which can be launched when a "*competition problem*" cannot be solved under conventional competition law provisions. They purport to correct market failures with the adoption of *ad hoc* remedies (*e.g.*, divestitures, elimination of facilitating practices, etc.), and do not seek to punish market players. Others have made original proposals, which include direct price regulation mechanisms,[300] price freezing remedies,[301] or Government financial support to tentative mavericks.[302]

A somewhat inevitable shortcoming of those proposals is to require an amendment of EU competition law. The current legal framework harbors no legal basis for the implementation of UK-like market investigations, price regulation mechanisms or Government subsidies. First, and contrary to the view of UK scholars, the sector inquiries of Article 17 of Regulation 1/2003 are by no means a surrogate to the UK market investigation regime. Unlike them, they cannot as such lead to the adoption of remedies, unless they are followed by a standard antitrust investigation under Article 101 and 102 TFEU.

Second, the behavioral and structural remedies of Article 7 of Regulation 1/2003 provide in themselves no legal basis for the application of price regulation measures. Their application is indeed subordinated to the proof of an infringement of Article 101 and 102 TFEU.

Finally, Governments' interventions in support of maverick players would likely infringe the prohibition of State aid under Article 107 TFEU.

An amendment to EU law would thus be inevitable to implement any of those remedies. However, such amendments involve complex, protracted negotiations between the Commission, the Council, the Parliament and possibly national Parliaments. In light of this, those scholarly proposals are impractical.[303] Furthermore, they entail what is perceived as overly intrusive intervention in the market place, and have thus failed, up to this point, to garner doctrinal traction.

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[299] R. Whish and B. Sufrin, "Oligopolistic Markets and EC Competition Law", op. cit., *supra* note 218; B. J. Rodger, "Oligopolistic Market Failure: Collective Dominance versus Complex Monopoly", (1995) 16 *European Competition Law Review*, 21.
[300] OECD, *Oligopoly*, DAFFE/CLP(99)25, 19 October 1999.
[301] B. Bishop, "Oligopoly Pricing: A Proposal", (1983) 28 Antitrust Bulletin, 311.
[302] M. Gal, "Reducing Rivals Prices: Government-Supported Mavericks as New Solutions for Oligopoly Pricing", (2001) 7 *Stanford Journal of Law, Business, and Finance*.
[303] As a result, controversial regulatory proposals are often abandoned for lack of support in one of those organs. More often, regulatory proposals are often watered down during the legislative process, and end-up at the lowest common denominator.

### *B. Competition Law Remedies – Article 101 TFEU*

*1.* <u>*Scope Issues*</u>. As seen above, Article 101 TFEU covers many facilitating practices, or to be more accurate, facilitating agreements which create problematic links amongst oligopolists. Those practices include exchange of information agreements, vertical agreements, horizontal cooperation agreements, financial bonds and transfer of technology agreements.[304]

Not unlike mergers, those practices facilitate collusion amongst oligopolists. It would thus make sense to scrutinize them with similar vigor. However, beyond firms' voluntary compliance with the principles established in old case-law precedents and more recent regulatory and soft law instruments, the Commission's enforcement record against such practices is close to inexistent. And absent a credible risk of enforcement proceedings in case of infringement, oligopolists have little incentives to comply with those legal principles. This is why some scholars have called for a muscular enforcement policy against facilitating agreements.

Those proposals go in the right direction. They allay some of the concerns relating to Type II errors generated by the exclusive application of the EUMR in tacitly collusive oligopolies. With Article 101 TFEU, competition authorities can indeed intervene in stable oligopolies where concentration dynamics are sluggish, and unwind those practices that make tacit collusion sustainable.

However, Article 101 TFEU is not a "catch-all" remedy.[305] Its coverage is indeed limited to conduct that consists in reciprocal contacts amongst oligopolists (*e.g.*, agreements or concerted practices or decisions by associations of undertakings). In contrast, unilateral facilitating practices from (i) oligopolists that facilitate collusion (*e.g.*, price signaling, purchases of minority shareholdings, industrial espionage, unilateral benchmarking, etc.); and (ii) from non oligopolists (*e.g.*, setting up of online price comparators, circulation of information by intermediaries, customers, suppliers, etc.), fall short of the prohibition.

[304] F. Mezzanote somewhat oddly confines the scope of Article 101 TFEU to facilitating practices in the form of information exchange agreements. F. Mezzanotte, "The Anti-Collusion Toolkit: Limits of a Policy that Combats the Facilitation of Collusion", (2011) 17(4) *European Law Journal*, 495–512.

[305] It could be argued that Article 101(3) TFEU exempts from the prohibition a number of anticompetitive agreements that otherwise generate redeeming efficiencies, and thus has limited coverage over tacit collusion. However, such exemptions are notoriously rare, and can anyway be withdrawn in cases of problems. Hence, we do not view Article 101(3) TFEU as a significant obstacle to the application of Article 101 TFEU to facilitating practices.

Moreover, Article 101 TFEU only applies to agreements between "*undertakings*". Consequently, agreements between firms and consumers that facilitate tacit collusion are not covered (*e.g.*, MFC clauses, English clauses, etc.). Finally, Article 101 TFEU has no teeth in situations of "*pure*" tacit collusion, where no facilitating measures are needed to tacitly collude.

In light of this, risks of Type II errors remain. Scholars like Prof. Lopatka have moreover suggested that oligopolists would exploit the loopholes of the law, with the adoption of facilitating practices that fall short of the prohibitions.[306]

*2.* <u>*Legal standard*</u>. Old habits die hard. As seen previously, EU competition law subjects the assessment of facilitating agreements to rudimentary standards that lie somewhere between the checklist approach and the modern game theoretic approach used in merger control. The Guidelines on horizontal co-operation agreements of January 2011 bring a good illustration of this.[307] They repeatedly talk of "*collusive outcomes*" but fail to embrace systematically the framework provided by the four conditions C1, C2, C3 and C4 applied under the EUMR.[308] The same analytical flaws infect the Guidelines on vertical restraints. They explicitly stress the facilitating effect of vertical agreements on "*tacit collusion*",[309] but mention only in passing the concepts issued from game theory.[310] The true sole exception to this is the 2004 Guidelines on technology transfer agreements. At paragraph 143, the Guidelines make a clean import the *Airtours* conditions into the assessment of licensing agreements under Article 101 TFEU.[311]

The erratic substantive standards applicable to facilitating agreements are unsatisfactory. Type I errors of the kind made under the EUMR at the time of the checklist approach cannot be excluded. The time thus seems ripe for a streamlining of EU competition instruments on

[306] J. E. Lopatka, "Solving the Oligopoly Problem: Turner's Try", (1996) 41 *Antitrust Bulletin*, 843, p.907: "*Facilitating practices tend to have good substitutes. If an unambiguously harmful practice can be detected and punished, oligopolists will likely turn to the next best device, eventually adopting one that is sufficiently ambiguous to avoid condemnation. The antitrust laws will have accomplished little then, except to have raised marginally the costs of collusion. That increase might reduce collusion, but the margin is likely to be slight*".

[307] Communication from the Commission — Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, *supra*.

[308] Even the new section on information exchange agreements sets confusing standards. Whilst it rightly refers to game theory concepts ("*common understanding*", "*monitoring*" and "*punishment*"), those concepts are not clearly and systematically articulated, and drowned out in a hotch potch of other considerations. *Idem*, §77.

[309] Guidelines on Vertical Restraints, *supra*, footnote 1: "*By collusion is meant both explicit collusion and tacit collusion (conscious parallel behaviour*".

[310] *Idem,* for instance in relation to resale price maintenance, §224.

[311] Commission Notice — Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, *supra* §134.

the template offered by the Guidelines on technology transfer agreements. Along those lines, a facilitating agreement should only be deemed unlawful (i) if it has an impact on one (or more) of C1, C2, C3 and/or C4; and (ii) if the other conditions are met. Only in such circumstances, can an agreement create a likely risk of tacitly collusive effects.[312] A stringent standard of proof is moreover warranted in light of the fact that often, such agreements yield efficiencies.

### *C. Competition Law Remedies – Article 102 TFEU?*

EU competition scholars have fretted over the scope of Article 102 TFEU in oligopolistic markets.[313] Those debates are all the more interesting, given the inability of the EUMR and Article 101 TFEU to fully eradicate tacit collusion. More precisely, a large body of scholarship has discussed the scope of the concept of "*collective dominance*" under Article 102 TFEU. Those debates have now entered a period of relative repose (1). In contrast, the notion of what constitutes abusive conduct remains unclear (2).

*1.* <u>*Collective Dominance as Effective Tacit Collusion*</u>. In modern EU competition law, the concept of collective dominance under Article 102 TFEU must be understood as a situation of observable, exteriorized tacit collusion.[314] In *Laurent Piau v. Commission*, the GC held that there is a collective dominant position where the firms "*present themselves or act together on a particular market as a collective entity*".[315] In our opinion, the concept of "*collective entity*" points to a certain amount of effectiveness of the tacitly collusive conduct. This is suggested by the use of the present tense and the absence of the modal words usually employed in single firm dominance cases, where the fact that a firm has the "*ability*" to

[312] The mere proof that the agreement influences either of C1, C2, C3 or C4 without the other conditions being fullfilled is not sufficient, as many efficient agreements do fulfil just one of those conditions, without ever unfolding into tacit collusion.

[313] L. Ortiz Blanco, *Market Power in EU Antitrust Law*, Hart Publishing, 2011, pp.230 and following.

[314] In line with the principles established by the CJEU in *Compagnie Maritime Belge* case. *See* CJEU, Joined cases C-395/96 and C-396/96 P, *Compagnie maritime belge SA v Commission*, 16 March 2000, C-395/96 P and C-396/96 P, ECR [2000] I-1365, §§36, 41, 42. *See* also Opinion of Mr Advocate General Léger delivered on 10 July 2001 in the case C-309/99, *J. C. J. Wouters, J. W. Savelbergh and Price Waterhouse Belastingadviseurs BV v Algemene Raad van de Nederlandse Orde van Advocaten*, ECR [2002] I-1577, §147: "*The concept of a collective dominant position may be described as follows. It refers to a situation in which two or more undertakings are connected to one another by connecting links or factors such that, from an economic point of view, they present themselves as a collective entity with the power to act, to a considerable extent, independently of their competitors, of their customers and also of consumers. In accordance with that description, a collective dominant position requires the undertakings to be sufficiently linked to each other to adopt the same conduct on the market*".

[315] GC, T-193/02, *Laurent Piau v. Commission*, *supra* note 232, §110.

exercise substantial market power suffices to establish dominance.[316] In other words, the proof of collective dominance is contingent on the existence of a market where tacit collusion has occurred, as opposed to a market where tacit collusion has not, but may (or may have) occur(ed).[317] To be jointly dominant, oligopolists must therefore have tacitly colluded.

Unfortunately, a number of old judicial pronouncements still cause doctrinal havoc. The *TACA* judgment is a case in point. In this case, the GC ruled that collective dominance was compatible with a degree of internal competition between the parties.[318] This proposition has caused a lot of confusion. From an economic standpoint, however, this simply suggests that situations of "*semi-collusion*" where oligopolists coordinate their conduct in one respect (*e.g.* price) but not in others (*e.g.* advertisement) also fall within the scope of Article 102 TFEU.[319]

But this is not all. In *TACA*, the GC uses other confusing words, such as "*is capable of presenting the TACA as a collective entity*",[320] "*enable the TACA to present itself as a collective entity*", [321] "*likely to present the TACA as a collective entity*",[322] which suggest that tacit collusion needs not be exteriorized. In the same vein, the Discussion Paper stresses that "*what matters is that they* [the oligopolists] *are* <u>*able*</u> *to adopt a common policy on the market*".[323]

In our view, those statements should be ignored. They are the unfortunate remnants of evolving case-law, and do not reflect contemporary judicial practice. In all recent cases, the GC has, on the facts, scrutinized whether the parties had effectively behaved as a collective entity. In *Laurent Piau v. Commission*, the GC examined whether the sports agents had

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[316] In conventional single firm dominance analysis, it is not necessary that market power has been exercised to give rise to a finding of dominance. The mere fact that the firm *can* exercise significant market power is sufficient for a finding of dominance. The Discussion Paper, *supra* note 241, states for instance at §23 that "*Dominance is the* <u>*ability*</u> *to prevent effective competition being maintained on the market and to act to an appreciable extent independently of other players* (emphasis added)".

[317] N. Petit, op. cit., *supra* note 249; P. Massey and M. McDowell, op. cit., *supra* note 102.

[318] GC, T-191/98, T-212/98 to T-214/98, *Atlantic Container Line AB and Others v Commission*, 30 September 2003 ECR [2003] II-3275, §654: "*there can be no requirement, for the purpose of establishing the existence of such a dominant position, that the elimination of effective competition must result in the elimination of all competition between the undertakings concerned*"; Commission Decision of 16 September 1998, IV/35.134 - Trans-Atlantic Conference Agreement, OJ L 95, 09/04/1999, pp.1-112, §522. For more, *see* S. Preece, "Compagnie Maritime Belge: Missing the Boat?", (2000) 8 *European Competition Law Review,* 388. *See* also J. Temple Lang, "Oligopolies and Joint Dominance in Community Antitrust Law", in B. Hawk (ed.), *Fordham Corp L. Institute,* 2001 269.

[319] The Commission endorsed this position in its 2005 Discussion Paper. *See* Discussion Paper, *supra* note 241, §44: "*It is not required that the undertakings concerned adopt identical conduct on the market in every respect*".

[320] GC, T-191/98, T-212/98 to T-214/98, *Atlantic Container Line AB and Others v Commission*, *supra* note 317, §624.

[321] *Idem*, §625.

[322] *Id.,* §626.

[323] *Id*.

effectively partitioned markets.[324] In *EFIM v. Commission*, the GC dismissed allegations of collective dominance based on market share stability, observing that the Commission had found market shares to be very unstable and that a new entrant had followed an aggressive strategy.[325] Last, but not least, even in *TACA*, the Court stressed that the shipping companies that were members of TACA had published several annual business plans, and thus "*were seen by shippers as having a single trading strategy on the market*".[326]

Of all possible approaches, our conservative interpretation of collective dominance as a situation of exteriorized tacit collusion is the sole acceptable one.[327] Any other interpretation – for instance, one equating collective dominant positions with all markets that could harbour tacit collusion – would place many oligopolies under Article 102 TFEU scrutiny, out of the uncertain conjecture that they might possibly capsize into tacitly collusive outcomes.[328]

With this in mind, the next question concerns evidentiary issues. The *ex post* proof that tacit collusion has taken place in a market generates an "*identification problem*".[329] As the old maxim says, "*correlation is not causation*". Price parallelism or supra-competitive profits in oligopolies find many explanations alien to tacit collusion, including undistorted

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[324] GC, T-193/02, *Laurent Piau v. Commission*, *supra* note 232, §114.
[325] GC, T-296/09, *EFIM v. Commission*, supra note ___, §§73 and 75.
[326] GC, T-191/98, T-212/98 to T-214/98, *Atlantic Container Line AB and Others v Commission*, *supra* note 317, §623.
[327] Most scholars to date construe collective dominance as "*behavioural*" in nature. See N. Petit, op. cit., *supra* note 249; F. Mezzanotte, "Using Abuse of Collective Dominance in Article 102 TFEU to Fight Tacit Collusion: the Problem of Proof and Inferential Error", op. cit., *supra* note 87; P. Massey and M. McDonell, op. cit., *supra* note 102; *See*, however, E.M. Iacobucci and R. A. Winter, op. cit., *supra* note 294, p.220 who talk of a "*collectively dominant market share*"). Back in the 1960s, Prof. Joliet had already observed that: "*A purely structural analysis will never be sufficient [...]. A detailed analysis of the behaviour of the oligopolists must be undertaken before a finding of collective market domination can be made. [...] [T]ests of performance must be used to conclusively confirm the inferences drawn from the examination of structure and conduct (emphasis added)*". *See* R. Joliet, *Monopolization and Abuse of a Dominant Position – A Comparative Study of the American and European Approaches to the Control of Economic Power*, op.cit., *supra* note 195, pp.239-240. In its glossary of competition law and economics, the OECD also takes a "behavioralist" approach of the shared monopoly doctrine: "*Anticompetitive behaviour by firms, normally an oligopoly, in order to secure monopoly profits for the firms as a group. Essentially, shared monopoly requires some form of collusion but stops short of being a formal cartel. It is therefore similar to tacit collusion. In a shared monopoly firms may not compete for the same customers and have instead local monopolies. Since in theory industry profits under a non-coordinated oligopoly will be less than those under monopoly, there is some incentive for firms in an oligopoly to attempt to coordinate their actions so as to achieve profits nearer the monopoly solution (emphasis added)*". *See* OECD, *Glossary of Industrial Organisation Economics and Competition Law*, 1997, available at http://www.oecd.org/dataoecd/8/61/2376087.pdf.
[328] For instance all those markets on which there is mere oligopolistic interdependence.
[329] On this, see N. Petit, op. cit., *supra* note 249, Chapter III.

competition,[330] multilateral effects arising from product differentiation,[331] Cournot competition,[332] Edgeworth cycles,[333] etc. Inferring tacit collusion from empirical data is thus marred with uncertainties. In *Impala v. Commission*, the GC acknowledged this:

> "*close alignment of prices over a long period, especially if they are above a competitive level, together with other factors typical of a collective dominant position, might, in the absence of an alternative reasonable explanation, suffice to demonstrate the existence of a collective dominant position* (emphasis added)".[334]

Some scholars have argued that short of compelling methods to prove that tacit collusion is the cause of observed parallel conduct, competition authorities should renege on enforcing Article 102 TFEU in oligopolistic markets. Mezzanotte, for instance, relies on examples drawn from the practice of NCAs, to claim that such cases are overly heavy and complex, and that the Commission should not (and will not) pursue them.[335]

At several levels, however, this claim has deficiencies. First, in modern EU competition law, nothing clearly requires the Commission to prove that tacit collusion is the sole cause of observed parallel conduct. On the contrary, a majority of scholars argue that in *Impala v. Commission*, the GC (and later, the CJEU) has relaxed the standard of proof of an existing collective dominant position.[336] Moreover, despite the lack of a unitary standard of proof in

[330] Situations of price uniformity may appear, for instance, in mature markets where technology and costs remain constant when operators price at marginal cost as a result of fierce competition in the market.

[331] S. Stroux, op. cit., *supra* note 33, §227. Pinkse and Slade show that price increases in the brewery industry had initially been suspected of tacit collusion, and were eventually caused by unilateral effects. *See* J. Pinkse and M. E. Slade. "Market Power and Joint Dominance in U.K. Brewing", (2004) 52(1) *Journal of Industrial Economics*, pp. 133-163.

[332] Similarly, in a model of so-called Cournot competition, which leads to price equilibriums situated between marginal cost-pricing and monopoly pricing, oligopolists may achieve supra-competitive profits absent tacit collusion.

[333] *i.e.* sequence of price increases and decreases. *See* E. Avenel, G. de Muizon and N. Daley, "Collective dominant position: Overcoming the Airtours criteria in the ex post control of anti-competitive practices", *Concurrences*, N° 4-2011, n°39886, pp. 41-50.

[334] See GC, Case T-464/04, *Independent Music Publishers and Labels Association (Impala) v. Commission*, 13 July 2006, [2006] ECR I-2, §252.

[335] F. Mezzanotte, "Using Abuse of Collective Dominance in Article 102 TFEU to Fight Tacit Collusion: the Problem of Proof and Inferential Error", *op. cit.*, p.101.

[336] B. Van Rompuy, "Implications for the Standard of Proof in EC Merger Proceedings: Bertelsmann and Sony Corporation of America v. Impala", (2008) 29(10) *European Competition Law Review*, pp.608-612; S. Stephanou, "Collective Dominance Through Tacit Coordination: The Case for Non-Coordination Between Article 82 and Merger Control 'Collective Dominance Concepts', *GCP: The Antitrust Chronicle*, October 2009(1), at p.5. In *Impala*, the GC explicitly, albeit in an *obiter dictum*, undermined the relevance of conditions C1, C2, C3 and C4. At paragraph 251 of its judgment, the GC declared that: "*in the context of the assessment of the existence of a collective dominant position, although the three conditions defined by the Court of First Instance in Airtours v Commission, paragraph 45 above, which were inferred from a theoretical analysis of the concept of a collective dominant position, are indeed also necessary, they may, however, in the appropriate circumstances, be established indirectly on the basis of what may be a very mixed series of indicia and items of evidence relating to the signs, manifestations and phenomena inherent in the presence of a collective dominant position.*" The CJEU, on appeal on points of law, has seemed to confirm this analysis. ECJ, Case C-413/06 P,

competition cases, the case-law is replete with references to "*likely*", "*properly demonstrate*", "*in all likelihood*", "*very plausible*", "*sufficiently reliable*", "*convincing/sufficient evidence*", "*very probable*", "*cogent evidence*", etc.,[337] which suggest that the Commission must prove that tacit collusion is the most likely, or convincing, explanation for observed parallel conduct.[338] Finally, the argument forgets that similar evidentiary difficulties also exist, even to a more dramatic extent, in EUMR proceedings. Under merger rules, competition agencies must assess the likely change brought about by the merger, by comparing *ex ante* and *ex post* merger competition. Yet, those authors do not suggest disapplying the EUMR.

Second, in many other legal disciplines, the absence of a "*silver bullet*" evidentiary method does not hinder the enforcement of the law.[339] In many areas, for instance in civil damages cases, courts face complex causation issues and yet decide cases under the "*preponderance of the evidence*" standard (causation more likely than not), rather than under the "*proof beyond reasonable doubt*" standard. One fails to see why competition law should follow distinct principles. All the more so given that – unlike in the US – a finding of a dominant position is not an infringement of EU competition law.[340]

Third, in contemporary competition economics, dozens of empirical studies have tested the existence of tacit collusion in particular economic sectors, and have come up with convincing evidence. To take only a few examples of them, in a 1986 study published in the *Journal of Industrial Economics*, Bresnahan managed to prove that the American Automobile Market had experienced a situation of tacit collusion in 1954 and 1956.[341] In a recent study, Billard,

*Bertelsmann AG and Sony Corporation of America v Independent Music Publishers and Labels Association (Impala)*, [2008] ECR I-4951. The Court noted at §§125 and 128 that "*objection cannot be taken to paragraph 251 of itself*". It also observed: "*In applying those criteria, it is necessary to avoid a mechanical approach involving the separate verification of each of those criteria taken in isolation, while taking no account of the overall economic mechanism of a hypothetical tacit coordination*".

[337] C. S. Rusu, *European merger control: the challenge raised by twenty years of enforcement experience*, Wolters Kluwer Law & Business, 2010, at p.154.

[338] In line with the standard in *Commission v Tetra Laval*, this assessment should be based on a body of "*factually accurate, reliable [...] consistent*" and exhaustive evidence. CJEU, Case C-13/03 P, Tetra Laval v. COmmission, [2005] ECR I-1113, at §39.

[339] Rather, the sole admissible limitation is that in such areas where legal standards are blurred, competition agencies should not inflict sanctions on non-compliant firms.

[340] Many authors tend to erroneously consider that being found in a dominant position is akin to being incriminated.

[341] See T. Bresnahan, "Competition and Collusion in the American Automobile Industry : The 1955 Price War", (1987) XXXV 4 *Journal of Industrial Economics*, 457.

Ivaldi and Mitraille find that the French audit market accommodates a situation of tacitly collusive dominance.[342]

Fourth, from a *de lege ferenda* perspective, a strict evidentiary standard that limits risks of "*inferential errors*" can be crafted. Under this proposed standard, the agency should collect market data suggestive of tacit collusion and, on this basis build a theory of harm. The Commission should then verify that C1, C2, C3 and C4 are fulfilled, and that they "*fit*" with the theory of harm. Finally, like in other Article 102 TFEU cases, the Commission should test the plausibility of its theory of harm through a "*but for*" analysis,[343] in other words identify the counterfactual market, for instance by relaxing one of C1, C2, C3 or C4.

Finally, from an institutional standpoint, the idea that the Commission should disregard such cases because it will waste resources trying to prove collective dominant positions involves a poor understanding of the working methods of competition authorities. First, competition authorities are not decisional silos. In cases where observed parallel conduct is not caused by tacit collusion, there may be other anticompetitive courses of conduct at play. And competition authorities may be very well-placed to examine them. For instance, non-tacitly collusive price parallelism may be caused by explicit (but hidden) collusion that falls within Article 101 TFEU,[344] or by unilateral market power that falls under Article 102 TFEU or the EUMR. Second, competition authorities are not only prosecutors whose sole mission is to push infringement cases. Their role is also to raise awareness to competition reforms across the various branches of government. If observed parallel conduct arises out of other sorts of market failures that cannot be solved under the competition rules, the authorities have a key role to play in advocating regulatory reforms to address the issue (*ad hoc* or sector-specific regulation, etc.).

[342] O. Billard, M. Ivaldi and S. Mitraille, "Evaluation of the Risks of Collective Dominance in the Audit Industry in France" (June 2011), *CEPR Discussion Paper No. DP8417*.

[343] S. Davies and M. Olcszak, "Tacit v. Overt Collusion, Firm Asymmetries and Numbers", Working Papers 08-32, Centre for Competition Policy, University of East Anglia. They suggest applying counterfactual analysis in collective dominance cases. However, they propose to test the actual outcome against the performance of a one shot non-cooperative game. But this cannot be a relevant counterfactual if the market under investigation works with repeated and indefinite interaction. Rather, the analysis should consist in testing the market outcome absent of one of the 4 conditions.

[344] Mezzanotte and others before have actually warned against this, in considering that such inquiries may lead to qualify as collective dominance conduct that is an "*undetected Article 101 violation*". *See* F. Mezzanotte, p.94. Parallel price increases can indeed be caused by explicit collusion in the form of cartels. See also J. Temple Lang, "Oligopolies and Joint Dominance in Community Antitrust Law", op. cit., pp.334-335. But we fail to see where the problem lies here, because the competition authority can open proceedings under Article 101 TFEU if the conditions for Article 102 TFEU are not met. The only risk is that the agency would circumvent the heavy Article 101 TFEU evidentiary hurdles through Article 102 TFEU proceedings. Yet, as we said, proof under 102 TFEU is not necessarily easier than under Article 101 TFEU. In addition, if the market is conducive to cartel, the tacit collusion explanation will not fly.

2. <u>*Abuse of a Collective Dominant Position*</u>. The content of the concept of abuse in collective dominance settings remains a conundrum. Only three basic signposts can be identified in the case-law. First, like in single firm dominance settings, the notion of abuse is not cast in stone. It is an open-ended concept that evolves with the case law, and the list of abuses provided at Article 102 TFEU is not exhaustive. As a result, competition authorities have a significant margin of maneuver to develop a novel theory of abuse in collective dominance situations.

Second, given that collective dominance is not unlawful, the concept of abuse covers conduct that is distinct from tacit collusion. As put by Whithers and Jephcott, abuse must be "*more*" or "*something else*" than the collective dominant position.[345]

Third, since the *Irish Sugar v. Commission* judgment, both joint and individual conduct from oligopolists can be deemed abusive.[346] For individual conduct to be abusive, the Court added that it "*only has to be capable of being identified as one of the manifestations of such a joint dominant position being held*".[347] In a specific section devoted to abuse of collective dominance, the Discussion Paper on Article 102 TFEU expanded on this somewhat obscure statement by offering examples of joint and individual abuses. As far as joint abuses are concerned, it gave the illustration of firms that would "*follow a common policy of denying potential rivals access to infrastructure or a policy to charge allegedly excessive prices to their customers*".[348] As far as individual abuses are concerned, it envisioned the situation in which the jointly dominant firms have "*different tasks, for instance that each should "defend" a certain area or group of customers in case of entry, and that the allegedly abusive conduct had only been observed on the part of one of the dominant undertakings as entry had only occurred in the area or customer group that it was supposed to defend*".[349]

With this limited background, competition scholars have poked and prodded the concept of abuse in collective dominance settings. Five proposals have been put forward in the literature. We review them in turn, focusing in particular on two parameters, *i.e.* legal feasibility – compliance with existing case law – and remedial utility – economic added value in the current remedial system.

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[345] See C. Withers and M. Jephcott, "Where to now for EC Oligopoly Control?", (2001) 8 *European Competition Law Review*, 295, pp.300 et 303.
[346] GC, T-228/97, *supra*, §66.
[347] *Idem.*, the Court added that it must "*relate to the exploitation of the joint dominant position which the undertakings hold in the market*".
[348] Discussion Paper, *supra*, §74.
[349] *Idem.* §75.

*a). Conventional Abuses?*

Several authors have supported a transposition of the conventional notion of abuse to collective dominance settings.[350] Put simply, conduct – and in particular exclusionary conduct – that is abusive in single-firm dominance cases should also be abusive in collective dominance cases (*e.g.*, rebates, discounts, predatory prices, price discrimination, etc.). Several collective dominance cases have already followed this approach.[351] It is thus manifestly feasible from a legal standpoint.

Clearly, however, this approach may have perverse remedial effects. This is especially true when the impugned abuse is individual and not collective. A hypothetical example is in order here. Suppose that there has been tacit collusion in an industry for some time. Suppose that one firm deviates from the collusive equilibrium by granting secret price reductions to certain customers. Suppose, finally, that the price cuts meet the (lax) conditions of abusively low prices defined in the single-firm dominance case-law (*e.g*. aggressive above cost pricing or below cost pricing).

Under positive legal principles, a competition authority should logically find collective dominance and abuse, and in turn hold the secret price cut unlawful. But from an economic standpoint, this is a Type I error. Price cuts are a form of pro-competitive cheating, likely to undermine tacit collusion.

Applying Article 102 TFEU to deviating firms may thus mistakenly chill individual incentives to cheat in tacitly collusive oligopolies. At the extreme, this interpretation may even provide rival oligopolists with an instrument to punish cheaters, with the initiation of Article 102 TFEU proceedings before competition authority and courts. Moreover, from a legal standpoint, this is also an error, because such conduct is far from being "*one of the manifestations of such a joint dominant position being held*" as requested by the case-law, but rather the contrary.

*b). Excessive Oligopoly Pricing?*

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[350] See S. Stroux, *op. cit.*, p.120; J. Temple Lang, "International Joint Ventures under EC Competition Law", *op. cit*., pp.335-336: "*Article 82 suggests that the kinds of behaviour which would constitute a violation of Article 82 in the case of an enterprise in a single dominant position would also constitute a violation in the case of joint dominance, and this is broadly correct*".

[351] CJEU, C-395/96 and C-396/96 P, *Compagnie Maritime Belge v. Commission*, *supra*. (involving selective price cuts); GC, T-228/97, *Irish Sugar v. Commission*, *supra* (in relation to rebates).

Professor Whish and Sufrin have proposed holding abusive excessive prices charged by tacitly collusive oligopolists.[352] The abuse here does not center on the parallel course of conduct. It targets the unfairly high price levels imposed by oligopolists on their customers. This reading is based on the wording of Article 102(a) TFEU, which prohibits the fact of "*directly or indirectly imposing unfair purchase or selling prices or other unfair trading condition*". It thus seems acceptable under the existing legal framework. That said, the Commission has made abundantly clear that such abuses did not constitute enforcement priorities.[353]

The same is true of output limitation practices and unfair trading terms. In the *Höfner and Elser* and in the *P & I* cases, for instance, the Court and the Commission have recognized that the structural failure of dominant firms to supply adequate quantity/quality of services could, in some circumstances, be tantamount to an abuse.[354] Yet, in recent years, the Commission has been very hesitant to pursue such cases.

This proposal is, however, of limited remedial utility. Forbidding excessive price levels in collusive oligopolies has little interest. As long as the conditions of tacit collusion subsist, oligopolists will grope for the next lower (and lawful) supra-competitive level. Under the so-called "*folk theorem*", there are indeed rafts of anticompetitive equilibria in tacitly collusive oligopolies.[355] Professors Whish and Sufrin proposal is thus only likely to achieve distributional transfers from producers to customers, by slightly reclining the tacitly collusive equilibrium. Surely, this mitigates the magnitude of the anticompetitive effects caused in the market place. But, it will not dispel the remaining allocative (price), productive (costs) and dynamic (innovation, investments, products) inefficiencies inflicted by tacit collusion.[356]

*c). Facilitating Practices?*

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[352] R. Whish and B. Sufrin, "Oligopolistic Markets and Competition Law", op. cit., *supra* note 218, p.75. Before them, Joliet had made a similar suggestion. *See* R. Joliet, *Monopolization and Abuse of a Dominant Position*, op. cit., *supra* note 195, p.240: "*In oligopolized industries [...], these abuses may consist of unduly high prices, monopolistic limitation of technology or output*".

[353] Guidance Communication on the Commission's enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, *supra* note 241, §7.

[354] *See* CJEU, C-41/90, *Klaus Höfner and Fritz Elser v Macrotron GmbH*, ECR [1991] I-1979; Commission Decision of 12 April 1999, IV/D-1/30.373 - *P & I Clubs, IGA* and IV/D- 1/37.143 - *P & I Clubs, Pooling Agreement*, OJ L 125 [1999], pp. 12–31.

[355] J.W. Friedman, op. cit., *supra* note 25.

[356] The allocative inefficiency will in particular be suffered by those unserved customers whose reservation price still remains inferior to the tacitly collusive equilibrium.

Professor Korah and many other scholars have proposed to apply the concept of abuse of collective dominance to "*facilitating practices*".[357] Oligopolists could be found guilty of abuse when they adopt practices that bring a contribution to tacit collusion: contingency clauses (English clauses, MFC clauses, etc.), unilateral price signaling, basic point pricing systems, facilitating contracts with end consumers, etc. In contrast to the previous proposal, this approach has a marked remedial interest. It complements Article 101 TFEU, in that it covers facilitating practices which fall short of an anticompetitive agreement between undertakings.[358] The risk of Type II errors identified at Section V is accordingly narrowed.[359]

The applicability of Article 102 TFEU to facilitating practices is, however, not entirely clear. This is because Article 102 TFEU does not outlaw conduct that gives rise to a dominant position.[360] It only covers practices whereby firms exploit an already existing dominant position. Given that the "*road to dominance*" is irrelevant,[361] facilitating practices that turn a non-collusive oligopoly into a tacitly collusive oligopoly should not be abusive under Article 102 TFEU.[362] Surely, Article 102 TFEU may apply to facilitating practices that strengthen an existing joint dominant position. Yet, in those cases, the elimination of the facilitating practice will just make it a more complex, though not impossible, for the oligopolists to sustain tacit collusion. Moreover, it seems mission impossible to say whether the impugned practice is a cause – in which case it should be lawful – promoter and/or amplifier of tacit

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[357] V. Korah, *EC Competition Law and Practice*, 7th ed., Hart Publishing, 2000, p.116: "*[...] Indeed, I would like to see Article 82 applied to such firms only in relation to devices facilitating tacit collusion*"; G. Monti, "The Scope of Collective Dominance Under Article 82 EC", (2001) 38 *Common Market Law Review*, 131, p.151; P. Muñiz, "Increasing Powers and Increasing Uncertainty: Collective Dominance and Pricing Abuses", (2000) *European Law Review*, 645-653, p.650; S. Stroux, "Is EC Oligopoly Control Outgrowing its Infancy?", (2000) 233(3) *World Competition*, 43, pp.45-46 et *US and EC Oligopoly Control*, op. cit., *supra* note 33, pp.168 and following; A. F. Bavasso, "Gencor: A judicial Review of the Commission's Policy and Practice, Many Lights and Some Shadows", (1999) 22(4) *World Competition*, 45; M. Grillo, "Collusion and Facilitating Practices: A New Perspective in Antitrust Analysis", (2002) 14 *European Journal of Law and Economics*, p. 153; T. Vecchi, "Unilateral Conduct in an Oligopoly According to the Discussion Paper on Art 82: Conscious Parallelism or Abuse of Collective Dominance", (2008) 31 *World Competition*, 385–400.

[358] And those that, as Lopatka noted, are devised to evade the boundaries of the law. *See* J. E. Lopatka, "Solving the Oligopoly Problem: Turner's Try", op. cit., *supra* note 305, quoted above in relation to avoidance strategies.

[359] This approach has been followed for some time in Canada, but was later abandoned. *See* E.M. Iacobucci and R. A. Winter, *op. cit*.

[360] CJEU, 6/72 *Europemballage Corporation and Continental Can Company Inc v Commission* , 21 February 1973 [1973] ECR 215, §§26 and 27; J. Faull and A. Nikpay (Eds), *The EC Law of Competition*, Oxford University Press, Oxford, 1999, §3.05, p.118.

[361] We borrow the expression "*road to dominance*" to L. H. Röller, "Exploitative Abuses", in C-D. Ehlermann and M. Marquis (eds.), *European Competition Law Annual* 2007: A Reformed Approach to Article 82 EC, Hart Publishing, Oxford/Portland, Oregon.

[362] This is very different from Article 101 TFEU, which outlaws agreements that create tacit collusion, or of Section 2 of the Sherman Act, which outlaws unilateral practices that create a monopoly (and possibly a shared monopoly).

collusion – in which case it can be deemed unlawful. Etiologists who work on the causes of diseases and notably on the impact of human conduct on health (*e.g.*, smoking, nutrition, etc.) know all too well those insuperable difficulties.

Finally, some scholars, such as Mezzanotte have lamented the fact that in addition to legal difficulties, the redeeming efficiencies of facilitating practices will make the balancing of pro and anticompetitive effects a daunting task, and the assessment prone to Type I errors.[363]

*d). Retaliation Practices?*

The proof of collective dominance simply involves evidence of a "*prospect*" of retaliation (*i.e.*, C3).[364] Hence, one can, and some may, argue that the notion of abuse covers "*actual*" retaliation practices taken against cheating oligopolists.

The problem with this interpretation is remedial in nature.[365] As most economists explain, retaliation entails at least a temporary return to cut-throat competition. In such settings, competition authorities necessarily intervene *ex post* facto, after the occurrence of observable competitive measures. Yet, at this stage, it is too early for competition authorities to tell whether such measures are retaliation practices – in which case there should be an abuse – or whether they mark the restoration of durable competition – in which case there should be no abuse. A risk of Type I error cannot be excluded. To be sure, competition authorities should err on the side of caution, and wait for some time to seek evidence of the subsequent restoration of coordination. However, in such circumstances, remedial intervention will be far from timely.

In addition to this, the economics of oligopolistic retaliation still seem too equivocal to be imported into a legal standard. Economists for instance disagree on the magnitude of retaliation measures. Whilst some believe that only measures akin to predatory pricing constitute an effective retaliatory mechanism, others view a mere temporary breakdown of collusion as a sufficient deterrent mechanism.[366] Moreover, economists still disagree on

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[363] F. Mezzanotte, "The Anti-Collusion Toolkit: Limits of a Policy that Combats the Facilitation of Collusion", op. cit., *supra* note 303, p.506

[364] R. O'Donoghue and J. Padilla, *The Law and Economics of Article 82 EC*, Hart Publishing, Oxford, 2006, p.158.

[365] Yet there are also legal feasibility issues. For instance, one may question whether it makes sense to treat as abusive conduct that is intrinsic in the nature of collective dominance. *Idem*, p.162.

[366] This is the approach followed by the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, *supra* note 259, §70 which state that "*The expectation that coordination may break down for a certain period of time, if a deviation is identified as such, may in itself constitute a sufficient deterrent mechanism*".

whether retaliation must be specifically targeted at the cheating firm (through, for instance, rebates targeted at the cheating firm's customers, other exclusionary and boycott tactics), or whether general retaliation through market-wide price reductions is a sufficient disciplining factor.

Finally, to draw inspiration from Schelling's words, the most spectacular event in a tacitly collusive oligopoly is one that does not occur.[367] In other words, oligopolists may sustain tacit collusion for a long time, without however, retaliation ever being triggered.

*e). Anti-Disruption Practices?*

Over time, tacitly collusive oligopolies are challenged by two types of disruptive events, *i.e.* the entry of a new firm (i); and external shocks such as natural disasters, change in tax rates, unexpected climate change, rise of new technological standard, etc. (ii). From an economic standpoint, those exogenous events undermine one or more of C1, C2, C3 or C4 and in turn create incentives for deviation.[368]

In both hypotheses, oligopolists may resort to specific strategies to overcome disruption, and keep tacitly colluding in the mid to long term. A final possible interpretation of abuse is thus to declare unlawful conduct that artificially protects tacit collusion from natural disruption.

From the outset, a chief interest of this interpretation is to eliminate the "*chicken egg*" problem that arose in relation to the above proposals. As seen previously, a prohibition of facilitating practices or of retaliation practices appeared legally unfeasible, given that the road to dominance is not unlawful in EU competition law. Here we talk of catching oligopoly conduct that had no influence on the emergence of tacit collusion, and that has been adopted subsequently. Moreover, this approach fully takes account of the dynamic nature of oligopolistic markets, as compared to the static approach that purported to hold unlawful all oligopoly conduct that could equally constitute abuse of single firm dominance.

i). Anti-Entry Strategies

[367] T. Schelling, "An Astonishing Sixty Years: The Legacy of Hiroshima", Nobel Address, 8 December 2005, available at http://www.nobelprize.org/nobel_prizes/economics/laureates/2005/schelling-lecture.pdf.
[368] This is because those events change the payoffs of collusion v. competition.

Entry threatens the stability of tacit collusion. Prof. Scherer and Ross report, for instance, that foreign import on the US steel market have repeatedly frustrated tacit collusion dynamics in the 1960s, 1980s and 1990s.[369]

In economic theory, entry undermines tacit collusion in several ways. First, the collusive profits must be shared with an additional firm. Each oligopolist thus reaps less individual profits from tacit collusion. In turn, the mutual interest for tacit collusion evaporates (C1 –). Second, with an additional player, monitoring becomes increasingly costly (C2 –).

Oligopolists can resort to three tactics to overcome the entry problem. First, they can take "*entry deterrence*" strategies, so as to dissuade prospective entrants from implementing their project. The economic literature is replete with examples of such practices, *e.g.* limit pricing,[370] aggressive advertising,[371] vertical integration,[372] etc.

Second, oligopolists can take standard "*exclusionary*" practices, with a view to force out a newly entered rival. Beyond predatory pricing, non-pricing strategies are also conceivable, such as systematic defamation of the new entrant, rent-seeking activities, etc.[373]

Third, oligopolists can engage in "*accommodating*" practices. The point here is to induce the new entrant to join the tacitly collusive equilibrium. Prof. Markovits gave the example of "*contrived oligopoly pricing*", to refer to threats of exclusion in case of non-cooperative conduct of the entrant.[374] Other accommodating strategies include negotiations seeking to establish economic links with the entrant (*e.g.*, the setting up of a joint venture), threats of takeover, acquisition of shares (*e.g.*, minority shareholdings), etc.[375]

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[369] Scherer and Ross, *Industrial Market Structure and Economic Performance*, op.cit., *supra* note 33.
[370] M. Canoy and S. Onderstal, "Tight Oligopolies – In Search of Proportionate Remedies", *CPB Document 29*, CPB Netherlands Bureau for Economic Policy Analysis, February 2003, p.38: "*Limit pricing is closely related to predatory pricing. The difference is that limit pricing is used as an instrument to maintain a tight oligopoly, rather than to establish it. Limit pricing is the practice of firms to demand low prices (or prices lower than optimal) in order to deter newcomers to enter the market. A firm makes short run opportunity losses (due to suboptimal prices) in order to obtain supranormal profits in the future (as competitors are discouraged to enter)*".
[371] D. Turner, "Advertising and Competition", *Address before the Briefing Conference Federal Controls of Advertising Promotion,* 2 June 1966.
[372] H. Blake and K. Jones, "In Defense of Antitrust", (1965) 65 *Columbia Law Review*, 377
[373] on the lobbying of US car manufacturers in the 1980s and the resulting quotas imposed by the US on imports. M. Scherer and D. Ross, *Industrial Market Structure and Economic Performance*, op. cit., *supra* note 33, p.256.
[374] R. S. Markovits, "Oligopolistic Pricing Suits, the Sherman Act and Economics Welfare: Part III. Proving (Illegal) Oligopolistic Pricing: A Description of the Necessary Evidence and a Critique of the Received Wisdom about Its Character and Cost", (1975) 27(2) *Stanford Law Review*, 307.
[375] This can be either negotiated, or on the other hand, unilateral.

| | Anti-Entry Behaviour | | |
|---|---|---|---|
| **Purpose** | Deterrence | Exclusion | Induction |
| **Timing** | Pre-entry | Post-entry | Post-entry |
| **Nature** | Non-cooperative | Non-cooperative | Cooperative |

From a legal feasibility standpoint, holding anti-entry oligopoly conduct abusive has a number of advantages. First, unlike the previous proposals, what is prohibited as abusive is not the collective dominant position itself, but the artificial maintenance of a crumbling dominant position through means alien to competition on the merits.

Second, and with the possible exception of the third category, all those strategies fit with the types of abuses traditionally sanctioned under Article 102 TFEU. In its 2005 Discussion paper on Article 82 EC, the Commission confirmed this, in enumerating possibly abusive practices from oligopolists: refusal to supply access to an essential facility,[376] predatory pricing,[377] selective price cuts,[378] single branding and rebates.[379] And in the case-law, several abuses of individual dominance cases come close to anti-entry abuses of collective dominance, and could arguably have been treated under our proposed approach. A famous example of such "*ghost*" oligopolistic dominance cases is the *Magill* case, which concerned the refusal of three TV operators to grant access to their weekly programme listings.[380]

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[376] Discussion Paper, *supra* note 241, §§74 and 211: "*A refusal to supply by several companies that are in a collectively dominant position can also be an abuse. This could take the form of refusing access to an input that is collectively owned by a group of companies. In addition, several collectively dominant companies refusing access to their individually owned inputs also could be abusive*".

[377] *Idem*. §98, (implicitly though: "*companies that are collectively dominant are less likely to be able to predate because it may be difficult for the dominant companies to distinguish predation against an outside competitor from price competition between the collective dominant companies and because they usually lack a (legal) mechanism to share the financial burden of the predatory action*").

[378] *Id.* §128 : "*An example of such an exceptional situation is where companies in a collective dominant situation apply a clear strategy to collectively exclude or discipline a competitor by selectively undercutting the competitor and thereby putting pressure on its margins, while collectively sharing the loss of revenues*".

[379] *Id.* §139 : "*The main possible negative effect of single branding obligations and rebate systems is foreclosure of the market to competing suppliers and potential suppliers, which maintains or strengthens the dominant position by hindering the maintenance or growth of residual or potential competition (horizontal foreclosure). In case such obligations or systems are used by several, collectively dominant, suppliers, this may have a cumulative foreclosure effect and may in addition further facilitate collusion*".

[380] In this sense, *see* J. Smith, "Television Guides: The European Court Doesn't Know There's so Much In It", (1992) 3 *European Competition Law Review*, 135, pp.137-138; R. Whish, *Competition Law*, Butterwoths, 2003, p.474; S. Stroux, *US and EC Oligopoly Control*, op. cit., *supra* note 33, note 91; M. Schodermeier, "Collective Dominance Revisited; an Analysis of the Commission's New Concepts of Oligopoly Control", (1990) 1

The main objection to the sanction of anti-entry abuses lies in the risk of erroneously prohibiting "*meeting competition*" practices. Discouraging oligopolists from responding to entry through competitive measures may lead to Type I errors, with the prohibition of socially beneficial conduct. But to the best of our knowledge, the same difficulty arises in abuses of single-firm dominance cases. Yet, no one suggests affording them blanket immunity. Rather, the issue boils down to devising a standard of proof that separates wheat – pro-competitive conduct – from chaff – pro-collusive conduct.[381] To overcome this new identification problem, a stringent evidentiary standard should be adopted. We believe that, in such cases, six elements should be proven: (i) existing tacit coordination; (ii) plausible (or actual) entry; (iii) intent based evidence of anti-entry conduct; (iv) nexus between tacit coordination and anti-entry conduct; (v) absence of alternative pro-competitive explanation; and (vi) evidence of actual/likely return to tacit collusion *post* entry.

More fundamentally, if it is proven that an oligopoly is subject to tacit collusion, risks of false convictions are somewhat acceptable. After all, any oligopoly subject to tacit collusion yields durable inefficiencies which should be eliminated. If a competition authority erroneously assists entry by forbidding legitimate meeting competition practices, this has nonetheless socially beneficial side-effects, as any entry undermines tacit collusion in the long term. Type I errors are thus a necessary evil.

ii). Adaptative Strategies

External shocks undermine the stability of tacit collusion. Business books and journals abound with stories of external shocks triggering price wars in stable oligopolies. The tobacco sector in Spain provides a good illustration.[382] In 2006, the Spanish Government

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*European Competition Law Review*, 28; B. J. Rodger, "Oligopolistic Market Failure: Collective Dominance versus Complex Monopoly", (1995) 16 *European Competition Law Review*, 21, pp.16-17. The same is true of *IGR Stereo Television-Salora* (European Commission, XIth Report on Competition Policy, §94), which was treated under Article 101 TFEU, but that could have been dealt with on abuse of collective dominance grounds. J. Temple Lang, "International Joint Ventures under EC Competition Law", op. cit., *supra* note 229, p.331. Finally, the *Marathon* case has sometimes been presented as a collective dominance case. *See* Commission Press Release, "Commission settles Marathon case with Thyssengas", IP/01/1641,23/11/2001 and European Commission, XXXIVth Report on Competition Policy, §296.

[381] Voir EAGCP Report, "*An economic approach to Article 82*", July 2005, pp.21-22: "*We therefore need to carefully identify the precise story that is supposed to summarize the alleged abusive behaviour, and to compare it with possible alternative explanations, if there are any, that derive from a non-abusive oligopolistic practice. This exercise identifies the relevant elements and the facts that allow discrimination between the lawful and anticompetitive explanations in a given and specific situation"*.

[382] Recently, in France, a similar situation occurred. In early 2011, the French Government announced an increase in the VAT on mobile phone subscriptions. The French mobile telephony sector is an oligopoly composed of three market players, often suspected of tacit collusion. Shortly thereafter, the n°1 and 2 players

increased taxation on cigarettes by 30%.[383] Altadis, one of the main cigarettes manufacturers, decided to pass on the tax increase to consumers. In contrast, Philip Morris apportioned part of it on its profit margin, in a bid to conquer market share. A price war occurred. Retail cigarette prices plummeted.

Technically, external shocks frustrate one of the four conditions of tacit collusion. The above illustration shows, for instance, that a tax increase – and by parity of reasoning tax cuts or State subsidies – upsets the common understanding of tacitly colluding oligopolists (C1 –).[384] This effect is even more compounded if the tax increase affects only some oligopolists, or if it affects all of them, but asymmetrically (*e.g.*, a tax weighing heavier on labor intensive oligopolists). In addition, some studies on value added taxes show that because prices are higher under tacit collusion, firms pay more tax per unit of output when they collude, and in turn have increased incentives to deviate.[385]

What is more is that external shocks are of many kinds. A few examples are here in order. Like a tax increase, a change in input prices (oil, electricity, etc.) undermines the common understanding of oligopolists (C1 –). A sudden demand surge entitles oligopolists to camouflage deviation behind market growth, and renders detection difficult (C2 –).[386] The emergence of a new technology (*e.g.* through a standard), or of new regulatory obligations (*e.g.*, environmental, product design, safety regulations, etc.) is likely to reset costs functions in the industry, and in turn to undermine oligopolists' common interest in tacit collusion (C1 – ). In addition, they bring a finite horizon to tacit collusion in the present market. In line with the theory of finitely repeated games, each oligopolist has a powerful incentive to cheat in the final period and possibly before (C1 –). Finally, market opening reforms of all sorts (*e.g.*,

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announced that they would pass-on the tax increase to their consumers. In contrast, the n°3 player decided to absorb the VAT increase on its profit margin. Eventually the two other players had to renounce their plan of passing on the VAT increase. *See* "Hausse de la TVA : qui sont les opérateurs les plus généreux", *Le Figaro*, 14 January 11.

[383] *See* "Marlboro y Chesterfield bajan de precio en plena guerra del tabaco", *El Mundo Economía*, 26 January 2006; "Altadis baja ahora el precio de Fortuna y Ducados para responder a Philip Morris", *El Mundo Economía*, 1 February 2006.

[384] Take the example of an oligopoly where firm 1, firm 2 and firm 3 tacitly collude and achieve a 10% profit margin. Assume that a tax increase annihilates 5% of their profits. Each of them can decide to pass-on the surcharge fully or partly or simply to maintain prices. Given that they cannot communicate expressly, it will be costly for them to redefine the equilibrium. The external shock thus brings an opportunity for competition.

[385] R. Damania, "The Impact of a Goods and Services Tax on Product Market Competition", (2000) 33(4), *Australian Economic Review*, 330.

[386] Conversely, in a situation of dramatic fall of demand, the incentive on each oligopolist to cheat by selling unused capacity is very strong (C1 –). D. Turner, "The Definition of an Agreement under the Sherman Act", (1962) 75 *Harvard Law Review*, 655.

liberalization policies in network industries, entry of generics firms in pharmaceuticals, etc.) increase the number of market players, and thus frustrate all of C1, C2, C3 and C4.

To overcome the dismantling force of external shocks, oligopolists may resort to a range of joint or unilateral practices. Although the economic literature on such conduct remains scarce, one can think of practices such as unilateral signaling, publication of price lists, rent seeking behavior and lobbying before public authorities, etc.[387] Many stories have, for instance, been written on airlines' subtle communication tactics following the attacks of 9/11, with operators arguably sending signals to each other that oil surcharges should be passed on to consumers.[388] Similarly, the attempts of the so-called "GSM oligopoly"[389] to challenge 3G IPR holders' licensing conditions through administrative and judicial actions come close to adaptative practices.[390]

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[387] Scherer and Ross, for instance, report unilateral announcements in the steel industry. F. M. Scherer and D. Ross, *Industrial Market Structure and Economic Performance*, op. cit., *supra* note 33, pp.258-259. Joint negotiations with other firms are not plausible given the antitrust prohibitions.

[388] The same happened following hurricanes Katrina and Rita in 2005. Of course, some of such practices are often nothing more than "*cheap talk*". *See* J. Farrell, "Cheap Talk, Coordination and Entry", (1987) 18 *RAND Journal of Economics*, 34. But in an entrenched oligopoly where firms know each other well, they convey at least some commitment value. *See* P. Areeda, *Antitrust Law : an Analysis of Antitrust Principles and Their Application*, 1st Ed., Little, Brown and Company, Boston, 1978, §1407a, p.28 and §1435c, pp.225-227, who was in favour of a drastic prohibition of such practice. *See* also, D. Flint, "Abuse of a Collective Dominant Position", (1978) 2(21) *Legal Issues in European Integration*, pp.52-53. And if, as some have argued, unilateral communication tactics are pervasive and are often objectively prompted by other motives such as customer, investors or shareholders information, this does not rule out the necessity to *a priori* control them when they purport to ensure competitor information in a subset of tacitly collusive oligopolies. J. Markham, "The Nature and Significance of *Price Leadership*", (1951) 41(5) *American Economic Review*, 891: "*in a number of oligopolies, it cannot be sure that an individual price increase is the result of a signalling strategy. There may be plenty other reasons for an oligopolist to individually increase its prices such as an increase in the cost of raw materials on supply markets or a more substantial cost/price sensitivity of this firm (due in turn to a more limited efficiency*". More generally, *see* L. Kestenbaum, "What is Price Signalling and How does it violate the Law?", (1980) 49 *Antitrust Law Journal*, 912; D. A. Washburn, "Price Leadership", (1978) 64(5) *Virginia Law Review*, 691, p.734.

[389] R. Bekkers, B. Verspagen and J. Smits, "Intellectual property rights and standardization: the case of GSM", (2002) 26 *Telecommunications Policy,* 171–188.

[390] In the early 2000s, the EU selected W-CDMA as the next technological standard for 3G mobile telephony thereby tolling the bell of GSM in Europe. Many essential patents for 3G mobile telephony belonged to Qualcomm inc., a US technology firm whose primary source of business is to license technology. In October 2005, a platoon of leading GSM manufacturers launched a flurry of legal attacks against Qualcomm in both the US and EU. In essence, the complaints argued that Qualcomm charged excessive and discriminatory royalties, in violation of previous commitments to license on FRAND (fair, reasonable and non-discriminatory) terms. Those complaints included IP and antitrust litigation. Many business observers have interpreted those disputes through the lenses of oligopoly theory. Most of the complainants indeed formed part of what was known as the "GSM oligopoly" (*e.g.*, Broadcom, Ericsson, NEC, Nokia, Panasonic, and Texas Instruments). Those firms had long enjoyed fat profit margins in the market for 2G infrastructure and terminals. With the rise of a new technological standard controlled by a third party, profit making opportunities plummeted. The complaints could thus be perfectly described as oligopolists' strategic conduct seeking to lower and even out licensing rates for Qualcomm's essential patents. This conduct could also be portrayed as anti-entry conduct. Yet, given that Qualcomm was at any rate bound to stay in the market, given its control of essential patents, entry deterrence or exclusion could not be a possible motive for the oligopolists.

In our opinion, Article 102 TFEU has a potential role to play against the adaptative tactics of tacitly colluding oligopolists. The contours of the notion of abusive adaptation of a tacitly collusive outcome should of course be devised with great care. Yet, and quite interestingly, some scholars have already seemed supportive to this proposition. Professor Lopatka, for instance, saw no objection to the fact that competition law could control conduct that stabilizes tacit collusion.[391] Economic research in this direction is certainly warranted, to refine our understanding of how oligopolists overcome the disruptive effects of exogenous events.

### *D. Pros and Cons of Rejuvenating Article 101 and 102 TFEU*

Irrespective of the particular notion of abuse to retain, or of the specific balance between Article 101 and 102 TFEU, a general *ex post* recalibration of EU competition enforcement against tacit collusion has many virtues. For a start, it affords the Commission the possibility to intervene in sectors where the EUMR-only approach generates type II errors (stable oligopolies, duopolies, etc.).

Besides this, *ex post* proof seems more robust than *ex ante* speculation. Proceedings under Regulation 1/2003 are indeed subject to laxer time constraints and informational imperfections than the EUMR.

*Ex post* intervention can also be predictable, contrary to what is often portended in mainstream scholarship. In our proposed interpretation, for instance, Article 101 and 102 TFEU only kick in in certain well-delineated settings, intelligible to stakeholders. On the one hand, Article 101 TFEU only applies in the presence of an agreement. On the other hand, Article 102 TFEU only applies to specific – yet to be defined – forms of conduct in the presence of a narrow, tacitly collusive oligopoly.

Finally, applying Article 101 and 102 TFEU in tacitly collusive oligopolies would remove a conceptual inconsistency of the current competition system. If we take a bird's eye view of the EU competition regime, anticompetitive practices are scrutinized both *ex ante* under the EUMR (to ensure prevention) and *ex post* under Article 102 TFEU (to ensure remediation). Exploitation practices fall under the notion of "*non coordinated*" effects in merger control, and under Article 102 TFEU in abuse of dominance law. Exclusion practices fall under the

[391] See J. Lopatka, "Solving the Oligopoly Problem: Turner's Try", op. cit., *supra* note 305, p.907 (with however reservations as to the practicability of this type of conduct).

concepts of "*foreclosure*" and "*leverage*" effects in merger control, and under the various categories of abuses under Article 102 TFEU. Surprisingly, however, collusion practices are not subject to a similar bipolar enforcement system. Tacit collusion is only controlled *ex ante* under the EUMR. Likewise, explicit collusion is only controlled *ex post* under Article 101 TFEU.

Despite all those advantages, however, the enforcement of Article 101 and 102 TFEU in tacitly collusive oligopolies remains a difficult sell. To take the words of Prof. Scherer, tacit collusion cases are "*big cases*".[392] The proof that parallel conduct is caused by tacit collusion and not by other market dynamics necessitates protracted economic inquiries and endless experts' quarrels. Resource constrained competition authorities and courts might thus be reluctant to spend time on such cases. Moreover, many of the above theories of abuse, in particular those related to facilitating, retaliation and anti-disruption practices are based on innovative interpretations of the law, which have never been confirmed by the EU courts. As a result, civil servants might be reluctant to push them in the decisional pipe-line.

## VII. Conclusion

All competition doctrines should be defined as accurately as possible because they impinge on individual freedoms and give rise to penalties that are akin to criminal sanctions. With this general principle in mind, we believe that beyond merger law, a clarification of the case-law on abuse of collective dominance is urgently needed. In its current state, the open-ended concept of abuse of collective dominance generates antipathy, defiance and concern – and rightly so – amongst scholars and practitioners, wary that all sorts of concentrated markets could randomly be subject to antitrust exposure.[393]

Moreover, the elastic principles defined in the case-law on abuse of collective dominance have at times been opportunistically applied, in situations remote from oligopolies. This has

[392] F. M. Scherer, "The Posnerian Harvest: Separating Wheat from Chaff", (1977) 86 *Yale Law Journal*, p.983: "*Every tacit collusion case [...] would be a "big case", drawing teams of economist to ply the courts with their expert but conflicting opinions. In the end, the decision would turn significantly upon whose experts were more credible. It would not, I fear, be a system highly likely to yield either truth or justice, especially when private respondents pay $1,000 per day for "credibility" (including extensive preparation) while the government is limited to $150 or (in exceptional cases) $250*".

[393] Amongst practitioners who have recommended moderation in the application of Article 102 TFEU to oligopolies, *see* T. Soames, "Towards a Smart Article 82 – *Qui Audet Adipiscitur*", in B. E. Hawk (ed.), *Fordham Corporate Law Institute*, 2005, 457, footnote 48, p.468.

given rise to bizarre legal disputes,[394] and possibly to regulatory abuses.[395] As a result, many firms, and not only oligopolistic ones, are placed today in a state of excessive legal uncertainty.

As it did when it paired single-firm dominance with the concept of "*significant market power*",[396] the Commission should clarify the meaning of both collective dominance and abuse. In this vein, we believe that the Commission should confine those concepts to certain types of conduct of tacitly collusive oligopolists. With this, the Commission may help channel the case-law of the Court, NCAs[397] national courts towards increased legal certainty and economic efficiency.[398] In *Wouters*, AG Léger had observed that "*[t]raditionally, a collective dominant position is a situation in which economic operators occupy an oligopolistic position on the market*".[399] Why not get back to basics?

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[394] As seen above, the concept of collective dominance has been developed in a haphazard manner, to help remedy *ad hoc* competition problems. It has been deemed to apply to a range of odd market situations, which span "*vertical*" dominant positions in the *Irish Sugar* case; the cumulative effect of single firm dominance positions in the *Almelo* and *La Crespelle* cases; "*atomistic*" dominance created by State intervention in the *Bassano* case; and agreements-driven dominance in *Compagnie Maritime Belge*. In *Laurent Piau*, the Court arguably circumscribed it, by subordinating findings of collective dominance to the proof of the features of tacit collusion (*i.e.*, conditions C1, 2, 3 and 4). Yet, the judgment did not explicitly over-rule the other odd cases decided by the Court in the past.

[395] The notion of collective dominance is occasionally evoked as a legal basis to undertake heavy handed price regulation, or to apply intrusive remedies, to market failures remote from oligopolistic collusion (for instance, in retail banking markets or in international mobile roaming).

[396] In the Guidance Paper on Article 102 TFEU, *supra*.

[397] In a recent survey, it was found that whilst most domestic authorities and courts now equate the notion of collective dominance with tacit collusion, some jurisdictions seem stuck in time, and still espouse a rudimentary interpretation which assimilates concentrated market structures – including possibly non tacitly collusive ones – with collective dominance. *See* N. Petit and N. Neyrinck, "Collective dominance: An overview of national case law", op.cit., *supra* note 248.

[398] It is interesting to note that the OECD alluded in 2002 to the possibility of extending the concept of collective dominance to anticompetitive oligopolistic inter-dependence falling short of tacit collusion. *See* OECD, Policy Roundtables, *Substantive Criteria used for Merger Assessment*, 2002.

[399] Opinion of Mr Advocate General Léger delivered on 10 July 2001 in the case C-309/99, *J. C. J. Wouters, J. W. Savelbergh and Price Waterhouse Belastingadviseurs BV v Algemene Raad van de Nederlandse Orde van Advocaten*, *supra* note 313, §150.

## Annex I – Commission Decisions involving Remedies for Coordinated Effects Concerns

| Case | Decision Date | Type of Procedure, of Merger | Creation or Strengthening of Coordinated Effects | Anticipated Market Structure | Type(s) of Remedy |
|---|---|---|---|---|---|
| Nestlé/Perrier | 22/07/1992 | Phase II, Horizontal | Creation | Duopoly | Type I and III |
| Kali + Salz/MDK/Treuhand | 14/12/1993 | Phase II, Horizontal | Creation | Duopoly | Type II |
| ABB/Daimler-Benz | 18/12/1995 | Phase II, Horizontal | Creation | Duopoly | Type I |
| Allianz/AGF | 08/05/1998 | Phase I, Horizontal | Creation | Duopoly | Type II |
| Danish Crown/Vestjyske Slagterier | 08/03/1999 | Phase II, Horizontal | Creation | Duopoly | Type I, II and III |
| Axa/GRE | 08/04/1999 | Phase I, Horizontal | Creation | Duopoly | Type II |
| Rohm and Haas/Morton | 18/04/1999 | Phase I, Horizontal | Creation | Duopoly | Type II |
| Vodafone/Airtouch | 21/05/1999 | Phase I, Horizontal | Creation | Duopoly | Type II |
| Airtours/FirstChoice | 22/09/1999 | Phase II, Horizontal | Creation | Triopoly | |
| SCA / Metsa Tissue | 31/01/2001 | Phase II, Horizontal | Creation | Duopoly | |
| Gencor/Lonrho | 24/04/1996 | Phase II, Horizontal | Creation (but "past […] tendency towards oligopolistic dominance") | Duopoly | |
| Exxon/Mobil | 29/09/1999 | Phase II, Horizontal | Strengthening (and/or creation) | 4-3 (and more) | Type II |
| New Holland/Case | 28/10/1999 | Phase I, Horizontal | Creation | Duopoly | Type I |
| AKZO Nobel/Hoechst Roussel | 22/11/1999 | Phase I, Horizontal | Creation | 4-3 | Type I |
| Air Liquide/BOC | 18/01/2000 | Phase II, Horizontal | Creation | Duopoly | Type I |
| Alcan/Alusuisse | 14/03/2000 | Phase II, Horizontal | Creation | Duopoly | Type I |
| VEBA/VIAG | 13/06/2000 | Phase II, Horizontal | Creation | Duopoly | Type II |
| REXAM(PLM)/American National Can | 19/07/2000 | Phase I, Horizontal | Creation | Duopoly | Type I |
| France Télécom/Orange | 11/08/2000 | Phase I, Horizontal | Creation | Duopoly | Type II |
| Grupo Villar | 26/09/2001 | Phase II, Limited overlap, | Strengthening | Duopoly | Type I |
| Norbanken/Postgirot | 08/11/2001 | Phase I, Horizontal | Creation | Duopoly | Type II |
| Shell/DEA | 20/12/2001 | Phase II, Horizontal | Creation | Duopoly | Type I and II |
| BP/E.ON | 20/12/2001 | Phase II, Horizontal | Creation | Duopoly | Type I and II |
| EnBW/EDP/Cajastur/Hidrocantabrico | 19/03/2002 | Phase I, Limited overlap | Strengthening | Duopoly | Type I |
| Solvay/Montedison-Ausimont | 09/04/2002 | Phase I, Horizontal (and some vertical aspects) | Creation | Duopoly | Type I |

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|---|---|---|---|---|---|
| Bayer/Aventis Crop Science | 17/04/2002 | Phase II, Horizontal (and some vertical) | Strengthening | Duopoly | Type I |
| Wallenius Lines AB/Wilhelmsen ASA/Hyundai Merchant Marine | 22/11/2002 | Phase I, Horizontal | Strengthening | 3 | Type II |
| Air Liquide/Messer Targets | 16/04/2004 | Phase I, Horizontal | Creation | Duopoly | Type I |
| AREVA/Urenco/ETC | 06/10/2004 | Phase II, Horizontal | Creation | Duopoly | Type II |
| AP Moller-Maersk AS/P&O Nedlloyd (PONL) | 29/07/2005 | Phase I, Horizontal | Creation | […] | Type II |
| Amer/Salomon | 12/10/2005 | Phase I, Horizontal | Creation | Duopoly | Type II |
| TUI/CP Ship | 12/10/2005 | Phase I, Horizontal | Creation | [...] | Type II |
| Dong/Elsam/Energi E2 | 14/03/2006 | Phase II, Horizontal + vertical | Strengthening | Quasi-Duopoly | Type I |
| Linde/BOC | 06/06/2006 | Phase I, Horizontal | Creation | Duopoly | Type I and II |
| Antalis/MAP | 24/10/2007 | Phase I Horizontal (and some vertical) | Creation | Duopoly | Type I |
| Lesaffre/GBI UK | 11/07/2008 | Phase I, Horizontal + vertical | Creation | Duopoly | Type I |
| ABF/GBI Business | 23/09/2008 | Phase II, Horizontal | Strengthening | Duopoly | Type I |
| RWE/Essent | 23/06/2009 | Phase I, Horizontal | Strengthening | Duopoly | Type I |