ECONOMICS AND OLIGOPOLIES IN EUROPEAN COMPETITION LAW AND POLICY

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"Antitrust is necessarily a hybrid policy science, a cross between law and economics that produces a mode of reasoning somewhat different from that of either discipline alone."

- Robert Bork
The Antitrust Paradox: A Policy at War with Itself
(New York: Simon & Schuster, 1993), 8.

Introduction

Research topic

Competition law and policy concerns itself with the regulation of the economic behaviour of firms. The underlying assumption of competition policy is that firms in free markets can, unilaterally or in cooperation, behave in such a way that competition between firms is hindered. The result of this behaviour is considered to be detrimental to the functioning and outcome of the market economy. The precise extent of what is considered to be anticompetitive behaviour has been subject to change throughout history and across jurisdictions. The two archetypes of anticompetitive situations are the monopoly and the cartel. Competition authorities are tasked with the enforcement of competition law. Their aim is to prevent and prosecute anticompetitive behaviour. The focus of this study is on the competition law and policy of the European Union and its predecessors. In contemporary Europe competition law is enforced at the national level, by national competition authorities, as well as at the European level, by the Directorate-General for Competition (DG Comp) of the European Commission (the Commission).[1] Decisions taken by the Commission can be appealed before the European Courts.

Most practitioners of competition policy are lawyers, but the subject matter that is of concern to competition lawyers–the economic behaviour of firms–is of course also studied by economists. The aim of this study is to show the role that economics as a science has played in the development of competition law regarding oligopolies. An oligopoly is a market where a small number of sellers are dominant. This can be contrasted with a monopoly, where there is only a single seller, or markets with higher numbers of sellers. One of the consequences of oligopolistic market dynamics is the possibility of tacit collusion between oligopolists. In such an event, firms would be able to a non-competitive outcome, for example through price parallelism, without the need of an explicit agreement to coordinate their behaviour. While for economists tacit collusion is not meaningfully different from explicit collusion, for legal issues the tacit nature of such anticompetitive coordination is problematic, because it limits the scope of evidence that can be provided to establish undesirable conduct. In the absence of explicit evidence, the enforcement of competition law can become more reliant on economic evidence. As such, the issue of oligopolies and tacit collusion can

[1] Most other nations in the world also have competition authorities, with notable examples being the Federal Trade Commission (FTC) and the Department of Justice (DoJ) in the United States. The FTC and the DoJ are both responsible for the enforcement of the same antitrust rules. For some background on this (unusual) situation of dual enforcement, see e.g. Hillary Green, "Agency Character and the Character of Agency Guidelines: An Historical and Institutional Perspective", *Antitrust Law Journal*, 72 (2005): 1039-56.,William E. Kovacic, "Downsizing Antitrust: Is It Time to end Dual Federal Enforcement?", *The Antitrust Bulletin*, 41 (1996): 505-40.

be of particular interest for the study of the diffusion of knowledge between the expert communities of economics and law.

The diffusion of knowledge across epistemological and academic communities is a relatively novel field of research interest. In a recent contribution to this field, Catherine Herfeld and Malthe Döhne have developed a network-based diffusion measure based on co-citation analysis to trace the spread of scientific innovations.[2] Their findings highlight the role of the translation of the scientific innovation for its successful spread towards other fields. The authors argue that "[t]ranslators have a crucial role" because they "make scientific innovation accessible, relatable, or applicable do discipline-specific or even new problems that lie outside the innovation's direct domain of applications … Thereby, translators introduce scientific innovations into distinct fields by facilitating their adoption across initially remote or novel domains of enquiry."[3] In the current study I will examine the diffusion of knowledge from a similar perspective of translation. However, where Herfeld and Döhne give a "birds-eye perspective on the spread of scientific innovations that is meant to complement more details (sic) historical studies",[4] I will in turn use their discovery of the importance of translation and apply it in a detailed historical study of the spread of economic scientific innovations to the domain of competition law. By employing an approach that underlines the role of language in science, I also attempt to allow for conclusions that can contribute to the very recent interest by historians and sociologists of science for the role of narratives, language, and translation in the history of science.[5]

Traditional accounts of the disciplines of economics and law have emphasised their differences. The economist "seeks to explain" and lawyer "seeks to achieve justice". The economist and the lawyer, in this view, "live in different worlds and speak different languages".[6] An alternative view proposes that there exists a legal-economic nexus, where shared facts might be differently comprehended.[7] The communicative barriers between the disciplines are the result of discipline-specific language to improve the effectiveness and efficiency of intradisciplinary communication as well as the reinforcement of a sense of exclusivity. Moreover, they reflect a discipline's modes of thought, cultural practices, and institutional frameworks.[8] Although not free from criticism,

[2] Catherine S. Herfeld and Malthe Döhne, "The Diffusion of Scientific Innovations: A Role Typology", 2017.
[3] Ibid., 26.
[4] Ibid., 33-34.
[5] See e.g., Mary S. Morgan and M. Norton Wise, "Narrative science and narrative knowing. Introduction to special issue on narrative science", *Studies in History and Philosophy of Science*, 62 (2017): 1-5.,Judith Kaplan, "Linguistic turns: Scientific Babel, the language of science, and the science of language", *Studies in History and Philosophy of Science*, 60 (2016): 88-91.,Bettina Dietz, "Introduction: Special Issue 'Translating and translations in the history of science'", *Annals of Science*, 73 (2016): 117-21.
[6] George J. Stigler, "Law or Economics?", *Journal of Law and Economics*, 35 (1992): 463.
[7] Warren J. Samuels, "The Legal-Economic Nexus", *George Washington Law Review*, 57 (1989): 1558.
[8] Douglas W. Vick, "Interdisciplinarity and the Discipline of Law", *Journal of Law and Society*, 31 (2004): 167-8.

mathematics has become the constitutive language of modern-day economics. Lawyers have their own language - marked with values and morality - that is employed within a theoretical framework based on the hermeneutic approach. Stigler has described the attitude of the disciplines of law and economics to each other as “a mixture of cooperation and hostility”.[9]

The law and economics nexus has a history that goes back at least as far as the beginning of the twentieth century. In its history, however, there have been many different approaches to the connection between law and economics. Generally when the topic of law and economics is discussed, it draws on an academic tradition rooted in the United States, which has become familiar as the “law and economics” movement. Earlier generations of scholarship had approached the interaction of law with economics from a legal internalist perspective. Economic theories and concepts were juridified and integrated in the legal system as doctrinal knowledge.[10] The law and economics movement departed from this approach by starting from a position external to the legal system. This generation went beyond the simple doctrinal analysis, emphasizing the economic analysis of law and its outcome in society. Such economic analysis was employed to assess legal intervention against the normative concept of economic efficiency. In the sense that efficiency was the fundamental problem for economists, justice was that of lawyers. The law and economics movement sought to assimilate the justice-seeking language of lawyers into the efficiency explanations of economists.[11] The economic analysis of law used the economic goal of efficiency as its fundamental concept, as a replacement of the legal goal of justice. The economic analysis of law endured as a productive approach to legal issues. Initially it was primarily employed in the common law system of the United States and later it also became a more prevalent approach to study issues in other legal systems.

In the current study, law and economics are considered to form two distinct subsystems in interaction with each other. The paradigm of translation is employed to study their interconnection and cognitive openness. This can be contrasted with other approaches, which are exclusively dominated either by law or by economics. The fact that economics obtained a considerable foothold at law schools was remarked upon in the light of the view that a discipline would naturally be resistant to any “broad-scale invasion by an alien and complex body of doctrine and method”.[12] The idea that economics is an imperial science and has aggressively taken ownership of central issues in

[9] Stigler, "Law or economics?" (1992), 455.
[10] Ioannis Lianos, "'Lost in translation?' Towards a theory of economic transplants", *Current Legal Problems*, 2009: 347, 400-401.
[11] William Davies, "Economics and the 'nonsense' of law: the case of the Chicago antitrust revolution", *Economy and Society*, 39 (2010): 71.
[12] Stigler, "Law or economics?" (1992), 466.

other disciplines has become its own field of research.[13] The paradigm of translation replaces that of imperialism to engage more satisfactorily with the linguistic and conceptual hospitality of competition law and competition economics.[14]

Research question

How has economic science been translated and applied in the development and enforcement of competition policy towards oligopolies under European competition law?

In answering the research question, this study intends to address three more general aims. First, it will offer a historical account of the development of a European competition policy, with special attention to the approaches that have been taken to addressing potential anticompetitive outcomes of oligopolistic markets. Second, it will describe different economic theories of oligopolies, while at the same time tracking, in a somewhat general fashion, the development of economics as a science. Third, it will show that the interpretation and application of competition policy has been contingent on legal and political arguments, but has also to a considerable degree been influenced by economic thought. More precisely, I will follow the development of the application of European competition regulation on oligopolies and how it has made use of economic theory. Specifically, I will show the role of, not only, "ordoliberal" and "Chicago School" economics, but also game theory in the development of a consistent approach to oligopolies in European competition policy. I will show to what extent economic concepts have been translated into the legal domain of competition law by policymakers, the European Commission, and the Courts. I argue that the parallel history of economics and competition law has produced a distinct conceptual language that employs a mixture of legal and economic narratives and frames. This language stems from the translational interaction between the legal and economic epistemological communities with regard to legal and economic concepts, models and theories.

Outline

The contents of this study are organized as followed. In Chapter 1, I describe the formative years of competition policy in Europe and the impact of ordoliberal thought on the content of the first

[13] E.g., George J. Stigler, "Economics: The Imperial Science?", *The Scandinavian Journal of Economics*, 86 (1984): 301-13.,Uskali Mäki, "Economics imperialism: Concept and Constraints", *Philosophy of the Social Sciences*, 39 (2009): 351-80.,Jaakko Kuorikoski and Aki Lehtinen, "Economics Imperialism and Solution Concepts in Political Science", *Philosophy of the Social Sciences*, 40 (2010): 347-74.
[14] Lianos, "Theory of economic transplants" (2009), 350.

competition regulation at the European level, in the European Coal and Steel Community and the European Economic Community. The next chapter looks more closely at subsequent economics of competition law and oligopolies, first the so-called Chicago School of competition economics and then the ascendency of the game-theoretic approach to oligopoly theory. Chapter 3 shows how the European Commission developed several approaches to deal with oligopolies and analyses the case law in which the European courts displayed their views on the oligopoly issues that were brought before them. In Chapter 4 it is discussed how the “more economic approach”, which was announced by the Commission in the early 2000s, ties in with the history of the law and economics nexus of competition policy in Europe. The concluding section summarizes and synthesizes findings of the earlier chapters.

Chapter 1. Setting the scene: The formative years of European competition policy

1.1 The origins of ordoliberal thought

The origin of competition law ideas in Europe[15] can be traced back to fin-de-siècle Austria. At that time, notable scholars such as Carl Menger and Eugen Böhm von Bawerk developed ideas that lead to the formation of a so-called "Austrian School of Economics", which flourished in Vienna and went on to inspire other famous economists such as Friedrich von Hayek. However, the actual influence of this Austrian School on the development of competition thinking in Austria at that time was not significant.[16] Rather, the Austrian ideas on competition law were formed by elite, such as law professor Adolf Menzel and politician and lawyer Franz Klein, who were trained in classical scholarship and humanistic values. A desire for economic competition was not the sole motive to develop a legal framework for the economy. The ideas emerged out of a combination of considerations regarding economic competition *and* considerations of community welfare. Whereas economic competition could contribute to the achievement of private goals, the considerations of community welfare would allow for the protection of public goals. To effectively combine these separate aims, it was believed to be essential that administrative decision-making would enforce the fulfilment of both these values.[17]

In 1923, Germany enacted the first competition law in Europe. The "Regulation against Abuse of Economic Power Positions" was influenced by the developing ideas on competition law in Austria. The possibility of introducing such legislation was being discussed in Germany before the First World War. The Austrian proposals and experience were debated vigorously in political as well as academic circles.[18] After the war, many of the ideas were implemented in the 1923 Regulation.[19] The political context in which this regulation came to function was turbulent. The Weimar Republic could count on few supporters. Eventually, the German competition law was not robust enough to resist the

[15] Competition law and policy, or more accurately *antitrust* law and policy (as this is the preferred terminology in the U.S.), developed independently in the United States. Its formative years will not be discussed here

[16] David J. Gerber, "The Origins of European Competition Law in Fin-de-Siècle Austria", *The American Journal of Legal History*, 36 (1992): 432 (fn. 140): "Contrary to my expectations, I found little indication that the Austrian school of economics had any significant direct impact on the development of competition law ideas".

[17] Ibid., 440: "administrative decisionmaking was considered necessary to deal with the conflicts arising from competing private and public goals".

[18] Ibid., 438.

[19] David J. Gerber, *Law and Competition in Twentieth Century Europe: Protecting Prometheus* (Oxford: Clarendon Press, 1998), 115.

pressures of economic lobbying, public opinion, and the National Socialist regime.[20] In 1933, the regulation was replaced by National Socialist legislation that mandated cartels and gave full control over their organization and monitoring to the Minister of Economic Affairs.[21]

During the years of the National Socialist regime and the Second World War, the Austrian ideas, which had influenced the first German competition law, were kept alive and developed further underground. In the very same year that the National Socialist regime seized power in Germany and replaced the cartel regulation, the founding fathers of the Freiburg School of Ordoliberalism met at the University of Freiburg.[22] Two lawyers, Hans Grossman-Doert and Franz Böhm, and an economist, Walter Eucken, drafted "The Ordo Manifesto 1936",[23] in which they voiced a view on the political economy that was in many ways similar to the aforementioned Austrian ideas, and thus radically different from the ruling regime. This opposition to the National Socialist ideology would turn out to have a positive effect on the success of the ordoliberals after the Second World War.[24]

1.2 The fundament of ordoliberalism

The most fundamental idea underlying the ordoliberal conception of the political economy is the "constitutional economic framework". The concept of an economic constitution that contains a formal set of rules pertaining to the nature and functioning of the economic system is fundamental to the Freiburg School of Ordoliberalism.[25] In this very important sense, the fundament of ordoliberalism was agreement with the earlier liberalist view that a competitive economic system was necessary, but that it at the same time also perceived that this could only come about if there was a "constitutional" framework that protected the competitive process from distortions from market power *and* from distortions by government intervention.

A central question that occupied the work of the Freiburg Ordoliberalists was how this economic constitution could be organized and enforced. The answer to this question had to provide a solution to both the element of government intervention as well as the element of market power abuse. The main two theses were therefore (1) the necessity of a state independent of economic

[20] Flavio Felice and Massimiliano Vatiero, "Ordo and European Competition Law," in *A Research Annual (Research in the History of Economic Thought and Methodology)*, ed. S. Luca Fiorito, Scott Scheall and Carlos Eduardo Suprinyak (Bingley: Emerald Group Publishing, 2015), 32:2, 147-57.
[21] Sigrid Quack and Marie-Laure Djelic, "Adaptation, Recombination, and Reinforcement: The Story of Antitrust and Competition Law in Germany and Europe," in *Beyond Continuity: Institutional change in Advanced Political Economies*, ed. Wolfgang Streeck and Kathleen Thelen (Oxford: Oxford University Press, 2005), 258.
[22] Ibid., 258.
[23] Franz Böhm, Walter Eucken and Hans Grossmann-Doerth, "The Ordo Manifesto of 1936," in *Germany's Social Market Economy: Origins and Evolution*, ed. Alan Peacock and Hans Willgerodt (London: Macmillan, 1936 [1989]), 15-26.
[24] Nicola Giocoli, "Competition versus property rigths: American antitrust law, the Freiburg School, and the early years of European competition policy", *Journal of Competition Law & Economics*, 5 (2009): 769.
[25] Giocoli, "Early years of competition policy" (2009), 749.

lobbies to secure citizens' freedom and rights against market power abuse and (2) a restrained state to protect individuals from abuse of public power.[26] The main pillar of competition law in this framework is the protection of competition through delimited state intervention. The economic constitution would have to be maintained by what was called "*Ordnungspolitik*". *Ordnungspolitik* amounted to a continuous evaluation of government action against the economic constitution. These order-based policies should be implemented as the government's translation into normative guidelines of economists' description of the ideal economic system.[27]

Ordoliberals envisioned for themselves a role in bridging the gap between the language of economic theory and the language of law and policy. This was made perfectly clear in the 1936 Ordo Manifesto:

> "The problem of understanding and fashioning the legal instruments for an economic constitution, however, can only be solved if the lawyer avails himself of the findings of economic research. If, for example, the legal practitioner or legal scientist has to deal with a question of unfair competition … it is imperative, particularly in this instance, to reason out the problem in accordance with the provisions of the economic constitution, for free competition is an essential structural principle of the present-day German economy. Free competition must not be stopped on the erroneous grounds of alleged unfair practice. On the other hand, it must not be allowed to degenerate into truly unfair competition either. How the line is to be drawn between unfair and permissible competition, whether there is free competition or not, whether competition is restricted, whether competition is efficient or obstructive, whether or not price-cutting contradicts the principle of the system-all these issues can only be decided by investigations conducted by economists into the various states of the market. The collaboration of the two sciences, which in this respect still leaves much to be desired, is clearly essential."[28]

1.3 The influence of the United States on the formation of competition rules in the ECSC

After the Second World War, a cooperation of the German and French coal and steel industries was conceived to facilitate an enduring peace in Europe. The United States showed reluctance to this proposal. The aim of establishing conditions for a lasting peace was supported, but the cooperation

[26] Felice and Vatiero, "Ordo and European competition law" (2015), 5.
[27] Giocoli, "Early years of competition policy" (2009), 772.
[28] Franz Böhm, Walter Eucken and Hans Grossmann-Doerth, "The Ordo Manifesto of 1936," in *Germany's Social Market Economy: Origins and Evolution*, ed. Alan Peacock and Hans Willgerodt (London: Macmillan, 1936 [1989]), 24-5.

between industries was seen as a potential scenario for cartelization.[29] The history in Europe before the Second World War had consisted of national competition policies primarily of abuse-based, *ex post* administrative enforcement with the notable exception of Germany. However, the first institutional experience of economic integration, the European Coal and Steel Community, was founded on a prohibition-based competition law (which has persisted in later institutional forms).[30]

The new competition rules that were adopted in Europe after the Second WW seemed, at first sight, to be conspicuously similar to the American antitrust regulation, which had been introduced by the so-called Sherman Act in 1890.[31] Moreover, they had as a clear aim to prevent domination by the efficiently organized, cartelized German industry. The goal of the Americans was to introduce antitrust laws in Europe which would break up the existing cartels and thereby free the way for American corporations to enter these new markets.[32] By making resources for the reconstruction of the European economies conditional, the United States had a position of significant influence on the drafting of the Treaty of Paris (1951), which established the ECSC.[33]

This rather narrow explanation of the establishment of antitrust regulation in Europe after the Second World War regards it as an assertion of American power. The United States pushed European countries to adopt American economic regulation, backed by the instrument of the Marshall Plan that provided economic aid. The formation of the ECSC was perceived to be hazardous, its primary risk being the creation of an enormous cartel-like cooperation. To avoid this result, the United States ensured that in the drafting process of the competition law in the ECSC Treaty their own antitrust ideas would be accommodated into the European market. The acceptance of the U.S.-inspired antitrust regulation can then be explained by the fact that the Member States were actively looking for new economic models, intrinsically motivated to stimulate economics over politics as the dominating principle in issues of the political economy.[34] This analysis views the origination of European competition rules as a by-product of the United States' evolution of antitrust law. As the

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[29] Quack and Djelic, "Antitrust in Germany and Europe" (2005), 262.,Eleonora Poli, "Ideas, interests and institutions in the globalising economy: The evolution and internationalisation of antitrust" (unpublished doctoral thesis, City University London, 2013), 216.

[30] Giocoli, "Early years of competition policy" (2009), 764.

[31] Sherman Antitrust Act, 26 Stat. 209.

Section 1: Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.

Section 2: Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony …

[32] Giocoli, "Early years of competition policy" (2009), 767.

[33] Silvia Beltrametti, "Capturing the Transplant: U.S. Antitrust Law in the European Union", *Vanderbilt Journal of Transnational Law*, 48 (2015): 1165.

[34] Poli, "Evolution and internationalisation of antitrust" (2013), 216-25.

narrative of the American history of antitrust perceives the influence of economic theory[35] as an inevitable driving force of the evolution of legislation and case law, so must the European competition law and policy be inherited from the same economic theories.[36]

However, the countries that founded the ECSC already had experience with some form of competition rules and national traditions. This background is an influence that must be taken into account in the history of the European competition law and policy. A more nuanced approach to the drafting of the competition rules questions the motivation of Germany in the process. If the primary aim of the competition rules was to break up the successful German cartels, why did they accept? The success of the transplantation of U.S. antitrust law into the European Coal and Steel Community can be explained more accurately from the perspective of the opportunity and advantages it created for certain constituencies, particularly the German ordoliberals.[37] Key positions in the German delegation to the negotiations were filled by prominent ordoliberals: Walter Hallstein, later the first President of the European Commission, and Ludwig Erhard, Germany's Economics Minister.[38] The ordoliberals were helped by the fact that the competition institutions of the European Community were in the process of being conceived. This meant they were not met with resistance from existing power structures and it gave them the opportunity to capture positions within the developing bodies. Their economic theory was "encapsulated in a constitutional framework" and reworked into enforceable legal norms.[39]

1.4 Ordoliberal involvement in the establishment of the European Economic Community

Ordoliberal views were present in the earliest stages of the European unification and at the highest levels. German ordoliberals were among the more adamant supporters of including competition rules in the Treaty of Rome (1957), which established the European Economic Community. In the first decades of the EEC, German administrators frequently headed the department of the European Commission that was responsible for the enforcement of competition regulation, the Directorate-General for Competition, and the first competition Commissioner was Hans von der Groeben who had strong ties with ordoliberalism.[40]

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[35] At that time, the economics underlying antitrust interpretation in the United States is commonly associated with the so-called "Harvard School", see Chapter 2 §1.
[36] Giocoli, "Early years of competition policy" (2009), 748-9.
[37] Beltrametti, "Capturing the transplant" (2015).,Gerber, *Law and competition in Europe* (1998), 271-3.
[38] Giocoli, "Early years of competition policy" (2009), 767.,Grahame Thompson, "The evolution of the managed economy in Europe", *Economy and Society*, 21 (1992): 134.
[39] Beltrametti, "Capturing the transplant" (2015), 1176.
[40] Laurent Warlouzet, "The Rise of European Competition Policy, 1950-1991: A Cross-Disciplinary Survey of a Contested Policy Sphere," *EUI Working Papers RSCAS*, 80 (2010), 8,Giocoli, "Early years of competition policy" (2009), 776-7.

The involvement of ordoliberalists reverberates in the interpretation and enforcement of the EEC competition regulation, especially Regulation 17/62, which assigned the administrative competences to the European Commission.[41] The ordoliberal views dictated that the economic constitution, which was laid down in the Treaty provisions regarding competition, was actively enforced. The key to achieving the ordoliberal goals lay in taking up the integration of the European market as the driving force for the execution of the constitutional standards. Germans were inclined to view the rules as the EEC economic constitution. Other delegations, France in particular, viewed the Articles as policy programs rather than enforceable law. Moreover, except for Germany, Member States perceived competition rules as marginal regulation which only had to be applied in the most extreme cases.[42]

The Treaty of Rome contained two articles central to the regulation of competition within the Member States of the European Economic Community. Article 85 prohibited harmful agreements between companies (cartels) and Article 86 restricted the behaviour of companies that had significant market power (abuse of dominant position). Detailed analysis of these articles and their origination has produced opposite opinions on the influence of the Freiburg School of Ordoliberalism on their content, arguing that this school of thought was hugely successful in propagating its ideas[43] or radically denying their impact on the EEC competition rules.[44] The Freiburg School of Ordoliberalism, associated most notably with Eucken and Böhm, is of course merely one particular (the first) rendition of ordoliberal thought. However, after the Second World War their ideas were refined, processed, and represented by a much broader group of intellectuals, such as the more neoliberal Friedrich von Hayek, or Alfred Müller-Armack, who would develop the “social market economy” concept that became the model for the German economy.[45] In other words, ordoliberalism was not “a static and homogeneous school of thought”, but rather “a family of ideas”.[46] This more nuanced view of the ordoliberalist “school” of thought has allowed for the conclusion that the history of European competition legislation is indeed to a significant degree in line with ordoliberal ideas, albeit not the more narrowly defined Freiburg ordoliberalism.[47]

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[41] Warlouzet, "Rise of competition policy" (2010), (9-10).

[42] Quack and Djelic, "Antitrust in Germany and Europe" (2005), 267-8.,Hubert Buch-Hansen and Angela Wigger, *The Politics of European Competition Regulation: A critical political economy perspective* (Abingdon: Routledge, 2011), 49-56.,Giocoli, "Early years of competition policy" (2009), 777.

[43] Gerber, *Law and competition in Europe* (1998).

[44] Pinar Akman, *The Concept of Abuse in EU Competition Law: Law and Economic Approaches* (Oxford: Hart Publishing, 2012).

[45] Peter Behrens, "The Ordoliberal Concept of "Abuse" of a Dominant Position and Its Impact on Article 102 TFEU," *Europa-Kolleg Hamburg, Instiute for European Integration*, No. 7 (2015), 2-3

[46] Mel Marquis, "Introduction, Summary, Remarks," in *European Competition Law Annual: 2007 A Reformed Approach to Article 82 EC*, ed. Claus-Dieter Ehlermann and Mel Marquis (London: Hart Publishing, 2008), xxxi (fn. 16).

[47] Behrens, "Ordoliberal concept of abuse" (2015).

The EEC Treaty included both market power and government power as possible threats to free competition and trade. These provisions were laid down at the "constitutional" level on the basis of a few general principles rather than practical set of administrative norms. Notably, the new competition law distinguished itself from U.S. antitrust law in its broad conception of economic power, in the form of abuse of dominance, and the fundamental function of this conception in the interpretation and structure of European competition law. This conduct-based approach, which focused on potentially excessive behaviour of firms, is clearly quite different from the American approach that relied on market structure characteristics as an indicator for non-competition.[48]

1.5 Substance of EEC competition regulation

The original formulation of European competition policy rules was particularly vague. The notions of dominance and abuse and how to establish criteria for their assessment were disputed. The concept of dominance has no technical meaning in economics, but is closely related to the economic concept of market power.[49] Abusive behaviour has been around in many forms in law since Roman times, for example when "unjust" prices were regarded as morally wrong.[50] Abuse of a dominant position is a relevant concept in Europe, but in the United States there is only the notion of monopolization power. The wording of Article 86 of the Treaty regarding the abuse of a dominant position by "one or more undertakings" was originally intended to refer to the market power of corporate groups.[51] The use of the notion of abuse, which implies a determination of whether conduct is socially harmful, is closely associated with the administrative enforcement of competition policy, as opposed to litigious enforcement (i.e. criminal or civil procedures before the courts).[52] The first substantive interpretation of the abuse concept was the "as-if" standard, which dictated that powerful enterprises had a duty to operate within the parameters of "complete competition". When their practices deviated from the competitive norm were in abuse of the defined standard. In other words, firms with significant market power had to behave "as-if" they were participating in a market of complete competition. This can be contrasted with the vague public interest standard that had prevailed before then. The standard of "as-if" competition was a Freiburg School concept.[53] While drafting the EEC Treaty,

[48] Giocoli, "Early years of competition policy" (2009), 774.
[49] Christopher Decker, *Economics and the Enforcement of European Competition Law* (Cheltenham: Edward Elgar, 2009), 35 (fn. 32).
[50] David J. Gerber, "Law and the Abuse of Economic Power in Europe", *Tulane Law Review*, 62 (1987): 60.
[51] For example, in *Deutsche Grammophon*, the court speaks of the power of the undertaking "alone or jointly with other undertakings in the same group", Case 78/70, *Deutsche Grammophon Gesellschaft mbH v Metro-SB-Großmärkte GmbH & Co. KG* (*Deutsche Grammophon*) (1971), para 17. Marilena Filippelli, *Collective Dominance and Collusion: Paralellism in EU and US Competiton Law* (Cheltenham: Edward Elgar, 2013), 77.
[52] Gerber, "Abuse of economic power" (1987), 65.
[53] Gerber, "Abuse of economic power" (1987), 70.

ordoliberals had let go of the notion of "complete" competition as the standard, and replaced it with an emphasis on the protection of the competitive market structure.[54]

The EEC Treaty of Rome consisted of two general rules: Article 85 (later Article 81, now Article 101) regarding cartels and Article 86 (later Article 82, now Article 102) regarding abuse of dominance.[55] Both rules could and have been applied to address oligopolies. In the Treaty there is no concrete mention of oligopolies or the associated harmful behaviour of parallelism or tacit collusion. At that time, in the United States there had already been two important cases in which the issue of tacit collusion had been scrutinized under the Sherman Act. The American courts had identified a number of structural factors that could be understood as indirect evidence of collusion.[56] In the absence of these factors, parallel behaviour was considered to be outside the scope of the antitrust rules defined in the Sherman Act. If the parallelism was found in the presence of these factors, the Sherman Act could be applied. This established an approach in the United States to possible harmful effects of oligopolistic markets, known as the "parallelism plus" doctrine.[57] During the drafting of the EEC Treaty the complexity of tacit collusion for the enforcement of competition policy by the authorities was known.[58]

In the early years the European Commission focused its competition enforcement on cartels. The ordoliberals viewed Article 85 an instrument to protect economic freedom, as opposed to the interpretation of protection of competitive markets.[59] The Section 3 exemptions of Article 85 were a clear example of the ordoliberal conception of a codified rule of reason to constrain the Commission's decision-making. The Court of Justice interpreted the ultimate goal of the competition law as the integration of Europe in the form of the Common Market. This had implications for the Commission, who were forced to accept the intellectual leadership of the Court and cooperate to be able to continue their own application of competition regulation.[60] The first and foremost interest of the European Commission and the Court of Justice has never been with competition as such, but with the goal of the integration of the common market with competition rules as an instrument to reach that goal.[61]

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[54] Behrens, "Ordoliberal concept of abuse" (2015), (8, 19).

[55] For the sake of simplicity, I will refer to the original numbering, as given in the Treaty of Rome. This numbering also covers the largest period of the history of European competition law. The Articles were renumbered first with the Treaty of Amsterdam (signed 1997, effective 1999) and later with the Lisbon Treaty on the Functioning of the European Union (signed 2007, effective 2009).

[56] Interstate Circuit Inc. v United States, 306 U.S. 208 (1939); Theatre Enterprises Inc. v Paramount Film Distributing Corp., 346 U.S. 537 (1954).

[57] American Tobacco v United States, 328 U.S. 781 (1946).

[58] Filippelli, *Collective dominance and collusion* (2013), 76.

[59] Andreas Weitbrecht, "From Freiburg to Chicago and Beyond: The First 50 Years of European Competition Law", *European Competition Law Review*, 2008: 83.

[60] Giocoli, "Early years of competition policy" (2009), 779-80.

[61] Ibid., 749.

Conclusions

The first ideas on competition regulation in Europe were developed by Austrian legal scholars and practitioners. They had a significant influence on the Regulation against Abuse of Economic Power Positions, the first European competition law (Germany, 1923). The same ideas led to the formation of the Freiburg School of Ordoliberalism. Their constitutional framework for economic regulation nourished many generations of ordoliberals. After the Second World War, ordoliberals successfully grafted their ideas onto the antitrust regulation that the Americans established in the European Coal and Steel Community.

The influence of ordoliberal economics in the formative era of EEC competition policy was not some progression in modelling of imperfect competition or a refined economic analysis, but their approach to the interconnection and mutual dependence of law and economics.[62] Ordoliberals saw competition as a valuable, but unstable and fragile quality of the market economy. The role of law, competition law, was to protect the competitive process from excessive market power. At the same time, the economic constitutional framework and its *Ordnungspolitik* was conceptualized to prevent harmful government intervention. The fragility of the competitive process was echoed in the ordoliberal views on oligopolies, which were seen to "soon [lead] to the creation of a cartel".[63]The impact of the ordoliberal influences in the formative era of European competition law was to open the path for a dialectal approach to competition policy issues that could be informed both by legal as well as economic arguments. Ordoliberalism encouraged a dialogue between the epistemological communities of law and of economics, instead of the cognitive closure of either.

In the first decision annulling an anti-competitive agreement taken by the Commission,[64] the parties took the case to court, where Advocate General Karl Roemer argued the economic evidence presented by the Commission was too narrow. The judgment of the Court was more ambivalent, overruling the annulment of the whole agreement, but also confirming substantial elements in the decision of the Commission.[65] This set the precedent for a long history of back and forths between the Commission and the Courts over the approach to the enforcement of European competition policy and the economic assessment of (anti)competitive conduct. To the extent that this history pertains to issues of oligopolistic markets, it will be discussed in the third chapter of this study. But

[62] Ibid., 784.

[63] Walter Eucken, "The Competitive Order and Its Implementation [transl. by Christian Ahlborn and Carsten Grave, orig. Die Wettbewerbsordnung und ihre Verwirklichung]", *Ordo, Jahrbuch für die Ordnung von Wirtschaft und Gesellschaft [reprinted in Competition Policy International]*, 2 (1949 [2006]): 244.

[64] Grundig-Consten (1964).

[65] Laurent Warlouzet and Tobias Witschke, "The Difficult Path to an Economic Rule of Law: European Competition Policy, 1950-91", *Contemporary European History*, 21 (2012): 448.

first, we will take a closer look at the development of more refined economic approaches to oligopoly theory.

Chapter 2. Competition economics and oligopolies

2.1 A Chicago view on oligopolies

In the 1960s, the oligopoly problem remained primarily a theoretical issue in Europe. Ordoliberals understood that oligopolies had a tendency to degenerate into cartels or monopolies, but there was no practicable consensus on the enforcement of competition law towards oligopolies as such. At the same time in the United States the applicability of legal measures on oliogopolies came to be at the core of an influential debate between opposing camps in the area of antitrust economics.[66] Scholars associated with the Harvard and Chicago law schools debated different forms of antitrust regulation. The "Chicago School", which had been branded by some of its core members as an organized school of thought,[67] was especially successful at creating an influential legacy that transformed the practice of antitrust regulation in the United States, and later, arguably, the competition law system in Europe.[68]

The scholars associated with the Chicago School of antitrust economics subscribed to a similar normative view of the merits of economics as a science and its role in the application of antitrust regulation. The normative and ideological pillar on which their views were based granted efficiency explanations priority over market power explanations, as the Pareto-optimality was considered the "natural" situation of markets. The formation of the Chicago School was to a large extent driven by an explicit politico-ideological ambition, rather than some "core scientific theory" or "abstract analytical characterization of the economy".[69] The goal of the Chicagoans was, in the words of Hayek, to establish a "liberal renaissance" to meet the "tide of Totalitarianism". As such, the establishment of their doctrine at the Chicago School was, merely, "a subordinate part of a larger and more

[66] Filippelli, *Collective dominance and collusion* (2013), 78, 80 (fn. 20).

[67] Louis A. Dow and Lewis M. Abernathy, "The Chicago School on Economic Methodology and Monopolistic Competition", *American Journal of Economics and Sociology*, 22 (1963): 235-49.,Eric Schliesser, "Inventing paradigms, monopoly, methodology, and mythology at 'Chicago': Nutter, Stigler, and Milton Friedman", *Studies in History and Philosophy of Science*, 43 (2012): at 161: "the formation of a shared narrative at 'Chicago'"; and the "construction of the Chicago 'paradigm'".,Craig Freedman, "South Side Blues: An Oral History of the Chicago School", *Journal of the History of Economic Thought*, 32 (2010): 510: "Stigler fully understood the importance of marketing".

[68] See generally, e.g., Richard A. Posner, "The Chicago School of Antitrust Analysis", *University of Pennsylvania Law Review*, 127 (1979): 925-48.,Herbert Hovenkamp, "Antitrust policy after Chicago", *Michigan Law Review*, 84 (1985): 213-84.,Patrice Bougette, Marc Deschamps and Frédéric Marty, "When Economics Met Antitrust: The Second Chicago School and the Economization of Antitrust Law", *Enterprise & Society*, 16 (2015): 313-53.,Weitbrecht, "Freiburg to Chicago" (2008).,Dzmitry Bartalevich, "The Influence of the Chicago School on the Commission's Guidelines, Notices and Block Exemption Regulations in EU Competition Policy", *Journal of Common Market Studies*, 52 (2016): 267-83.,Nicola Giocoli, "Old lady charm: Explaining the persistent appeal of Chicago antitrust", *Journal of Economic Methodology*, 22 (2015): 96-122.

[69] Rob van Horn and Philip Mirowski, "The Rise of the Chicago School of Economics and the Birth of Neoliberalism," in *The Road from Mont Pèlerin: The Making of the Neoliberal Thought Collective*, ed. Philip Mirowski and Dieter Plehwe (Cambridge (MA), London: Harvard University Press, 2009), 139-40.

comprehensive scheme—a political movement".[70] An inherent result of this approach was that the notional boundaries of disciplinary economics as a technical subject were expanded. To establish a politico-ideological liberal movement, the subject of law was considered to be equally relevant to their scholarly discourse as economics. This provided a foundational basis for the legal-economic nexus that influenced the development of competition policy considerably for many decades. Its theoretical pillar was that of the "tight prior equilibrium", the idea that economic systems spontaneously reach the Pareto-optimal equilibrium provided they are not disturbed by outside interferences.

The exceptional and long-lasting influence of Chicago can be attributed to its pragmatism and functionality. The pragmatic pillar was the special ability of Chicago scholars to translate their economic arguments into operational principles that could be easily understood and applied by courts and lawyers. The legal and economic influence of the Chicago School emerged in the 1950s and has been dominant in the US ever since. A central debate in scholarship on historical and current competition law is the question of the "goal of competition policy". Briefly put, the discussion has been between advocates of different goals: economic efficiency, consumer welfare, protection of competition, protection of competitors, consumer choice, or some combination of the aforementioned. Historical research shows that the goal of competition policy has been contingent and ambiguous. One conclusion that has been drawn is that the lasting influence of the Chicagoan interpretation of competition law can be explained in part by its relatively straightforward tenets when adopted by lawyers.[71] Namely, the Chicago School rejects any other goal than allocative efficiency, whereby the judicial assessment of economic behaviour does not have to concern itself with the insurmountable challenge of weighing multiple rights or goals. Especially Bork recognized that pre-Chicago antitrust policy was falling into the trap of protecting competitors instead of competition, even when it recognized it was making that exact mistake. The Chicago School came up with a set of antitrust principles to avoid this trap. Economic analysis played a number of significant roles in these principles.[72] The Chicagoan approach is an economic approach and implies assessing efficiency gains on a case-by-case basis. It stressed the need for an empirical assessment of the consequences of legal intervention on the basis of competition considerations. Paradoxically, this school of thought evolved into a legal framework of *per se* rules that provided competing firms with safe harbours from antitrust intervention.

The oligopoly problem has not always been perceived as demanding a legal response. In the United States the debate whether antitrust law should be concerned with the oligopoly problem has

[70] Ibid., 149.
[71] Bougette, Deschamps and Marty, "When Economics Met Antitrust" (2015).
[72] David S. Evans and Michael Salinger, "Competition thinking at the European Commission: Lessons from the aborted GE/Honeywell merger", *George Mason Law Review*, 10 (2002): 507-8.

been on-going since the 1960s. For example, Donald Turner (who would later head the Antitrust Division of the Department of Justice) stated that "[a]ny economist worth of the name would immediately brand [conscious parallelism] as noncompetitive",[73] but he concludes that "oligopoly pricing should be excluded from the scope of unlawful agreement … [i]n a very few cases", such as in coordinating price systems (as opposed to basic prices) or parallel exclusionary practices.[74] Rather, as head of the Antitrust Division, Turner applied "as a prophylactic against oligopoly a strict policy … of limiting horizontal mergers."[75] This approach to the regulation of oligopolies was characteristic of the Harvard School of antitrust thinking that was dominant before the influence of the Chicago School. From the mid-1930s onwards, for three decades there had been a high degree of congruence between the judicial decisions and conventional economic thinking on antitrust matters in the US. This reasoning, summarized as the structure-conduct-performance approach developed by Edward Mason,[76] focused on the structural characteristics of markets as the causal mechanism for the behaviour of businesses. According to the tenets of the Chicago approach, the structuralist claim of causation was plain wrong, as it misunderstood the connection between the number of firms in a market and the amount of profit that could be made.

The theory of collusion that Turner applied as a means for dealing with oligopolies emphasized the links between conduct and market structure, holding that anticompetitive behaviour could be the product of oligopolistic market structures. Against this belief, scholars associated with the Chicago School highlighted the difficulty of creating and maintaining collusion. George Stigler, an economist, was influential in this regard. In "A Theory of Oligopoly", he demonstrated that cartels are highly unstable structures and that successfully maintaining collusion, tacit or explicit, is unlikely.[77] The practical consequence of framing the oligopoly problem as a cartel, combined with the general non-interventionist attitude, was that enforcement against potential tacit collusion was extremely weak. Despite an on-going theoretical debate on parallelism, the parallelism plus doctrine remained substantially unapplied.[78]

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[73] Donald F. Turner, "The Definition of Agreement under the Sherman Act: Conscious Parallelism and Refusals to Deal", *Harvard Law Review*, 75 (1962): 661.
[74] Turner, "Conscious parallelism" (1962), 673-81.
[75] Richard A. Posner, "Oligopoly and the Antitrust Laws", *Stanford Law Review*, 21 (1969): 1562-606.
[76] Edward S. Mason, "Price and production policies of large-scale enterprises", *American Economic Review Papers and Proceedings*, 29 (1939): 61-74.
[77] George J. Stigler, "A Theory of Oligopoly", *Journal of Political Economy*, 72 (1964): 44-61.
[78] Filippelli, *Collective dominance and collusion* (2013), 17.

2.2 Game theory

At the same time that the Chicago style of antitrust thinking made its definitive breakthrough, exemplified in the landmark ruling of the U.S. Supreme Court in *GTE Sylvania*,[79] a series of new results in industrial economics based on the application of game-theoretic tools seemed to show a contrary result. The accomplishments of the Chicago School were to provide a rationale for the competitive nature of practices previously deemed anti-competitive, merited by efficiency considerations. The new industrial economics provided the anti-competitive rationale behind these very same conducts.

Developed in interwar Vienna and first applied to economics by von Neumann and Morgenstern in 1944,[80] game theory only became taken more seriously by economists and applied systematically to economics in the 1970s and 1980s. It provided a rigorous way for economists to think about problems of strategy, such as those involved with oligopolies,[81] and can be considered currently to be the central theoretical framework for the subject of economics.[82]

Before game theory came onto the scene of economics, the general equilibrium model was dominant. The lack of explanation this model provided for disequilibrium adjustments was unsatisfactory. The tools of game theory facilitated the evaluation of various equilibria and their characteristics. With game theory, new situations and problems came into analytical focus. One such problem is that of multiple equilibria, between which economic theory provided no tools for determination.[83] A small group of mathematicians and economists were involved in the so-called formalist "revolution" in economics. They viewed the equilibrium not as a state of rest between dynamic periods, but as a static concept validating the internal consistency of the model. The complex mathematical substantiation of this radically new formalist approach signalled a new conception of economics as a science. However, game theory - its theoretical breeding grounds – was not accepted by the majority of the economist community for the next decades.[84]

Progress in economic theory in the 1960s had made it apparent that there was an "oligopoly gap" in competition rules.[85] Despite the fact that the oligopolistic markets are predominant in most

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[79] *Continental Television v GTE Sylvania*, 433 U.S. 36 (1977); Ioannis Lianos, *La transformation du droit de la concurrence par le recours à l'analyse économique* (Brussels: Bruylant, 2007), 12.

[80] John von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (Princeton: Princeton University Press, 1944).

[81] Roger E. Backhouse, *The Puzzle of Modern Economics: Science or Ideology?* (Cambridge: Cambridge University Press, 2010), 109.

[82] Ibid., 9.

[83] Peter J. Boettke, Peter T. Leeson and Daniel J. Smith, "The Evolution of Economics: Where We Are and How We Got Here", *The Long Term View*, 2008: 14-22.

[84] Nicola Giocoli, "Fixing the point: the contribution of early game theory to the tool-box of modern economics", *Journal of Economic Methodology*, 10 (2003): 3.

[85] Nicolas Petit, "The Oligopoly Problem in EU Competition Law," in *Handbook on European Competition Law: Substantive Aspects*, ed. Ioannis Lianos and Damien Geradin (Cheltenham: Edward Elgar, 2013), 288.

sectors of the economy,[86] they provided some of the most difficult challenges for economists to analyse. Economic literature suggested that firms operating in oligopolistic markets have considerable incentive to collude. This can result in “market failure”, whereby the outcome that is established through market processes without intervention produces suboptimal welfare. This became known as “the oligopoly problem”.

Collusive behaviour can occur in two forms. Explicit collusion is where agreements are made between oligopolists about their future conduct. The most typical example of this is a cartel arrangement, for example to set prices or production levels or divide customers. The nature of oligopolistic markets gives rise to the potential for firms to collude without making explicit agreements to this purpose, but rather by coordinating their behaviour tacitly. Tacit collusion in economic science is not a unified theory but rather a theoretical paradigm that comes in several forms which share a common set of features and assumptions, at the basis of which is the assumption that interdependence between oligopolists can produce competitive as well as collusive behaviour.[87]

Early models of oligopoly behaviour made “static” predictions on what behaviour could be expected in a given period and what equilibrium this would evoke. The basic idea of the static models of oligopoly was that each player in the oligopolistic market would attempt to maximize its own profit on the basis of the expected strategy of the other players. The earliest static model of oligopoly was presented by the French mathematician Augustin Cournot in 1838. In the Cournot model, each firm sets its output level according to its own reaction curve, so that the equilibrium is located on the intersection of the reaction curves. The competitive output of this model, the Cournot equilibrium, lies between the perfectly competitive and the monopolistic equilibrium.[88] The first critique of this model resulted in the Bertrand model, where the firms choose prices instead of output quantity. In this scenario, the firms are incentivized to always undercut their competitor. As a consequence, the equilibrium that is perceived is a price at the level of marginal costs, resulting in a perfectly competitive outcome.[89] Concentrating on the oligopolistic interaction on price, further refinements of the Bertrand model were made to take account of limitations on capacity (the Edgeworth model)[90] or on the timing of the decisions (the Stackelberg model).[91]

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[86] Petit, "Oligopoly problem in EU" (2013), 259.,Decker, *Economics and enforcement* (2009), 8.
[87] Decker, *Economics and enforcement* (2009), 40.
[88] Boris Etter, "The Assessment of Mergers in the EC under the Concept of Collective Dominance: An Analysis of the Recent Decisions and Judgments - by an Economic Approach", *Journal of World Competition*, 23 (2000): 112.
[89] Ibid., 112-3.
[90] Decker, *Economics and enforcement* (2009), 41.
[91] Etter, "Assessment of mergers" (2000), 113.

Developments in game theory have elucidated three sets of assumptions on which a model must rest.[92] The possibility of binding commitments differentiates the cooperative game, where firms are able to reach enforceable agreements, from the non-cooperative game. Considering that antitrust regulation makes such agreements illegal, thus not enforceable, it is fair to say that oligopoly models for the use of antitrust analysis are based on the non-cooperative game. The frequency of market interaction differentiates the one-shot games from repeated games. The static models of oligopoly can be seen as one-shot games. In reality, the fact is that firms generally interact repeatedly. The way in which firms form their expectations of their competitors' behaviour is the final assumption that is used for the oligopoly model. The general answer that game theory provides to this question is that the players of the game decide on their best choice by supposing that other players also behave rationally. The result is the Nash Equilibrium, in which each player has no reason to deviate from making the choice he has made.

By using these game theoretic concepts, economists are able to model dynamic oligopoly as a series of repeated games between oligopolists. A (tacitly) collusive outcome can be produced if the oligopoly game adheres to three criteria.[93] The oligopolists must have the possibility of reaching an agreement: they have to be aware of their common interdependence and play the game to maximise joint profits. The oligopolists must have the possibility to monitor each other's behaviour: if a player deviates from the tacit understanding to increase individual profits, at the cost of joint profits, this has to be identifiable. Finally, the oligopolists must have a credible retaliation mechanism: the cheating player has to be punished, either by a period of natural competition or by a more targeted competitive pressure. The dynamic models provide insight into the conditions that provoke tacit collusion and show that tacit collusion can be expected to arise when short-run gain of cheating is lower than the long-run cost of the breakdown of the tacit collusion.[94]

Early models of oligopoly focused on structural indicators that were perceived as proxies for the potential for collusion, such as the relationship between market concentration and profit.[95] However, these models were criticized for containing "no hard analytic theory formalising the structure-conduct-performance paradigm".[96] Representative ordoliberal and Chicago figures were equally unconvinced of the merits of early game theory, stating it lacked explanatory power for the

[92] Ray Rees, "Tacit Collusion", *Oxford Review of Economic Policy*, 9 (1993): 29-30.
[93] Etter, "Assessment of mergers" (2000), 124.
[94] Decker, *Economics and enforcement* (2009), 41-2.
[95] Joe S. Bain, "Relation of profit rate to industry concentration: American manufacturing, 1936-1940", *The Quarterly Journal of Economics*, 65 (1951): 293-324.
[96] Franklin M. Fisher, "Games Economists Play: A Noncooperative View", *The RAND Journal of Economics*, 20 (1989): 113.

complexity of the economic system.[97] Despite the flourishing of activity in the field of industrial organization after the acceptance of game theoretic reasoning, there remained scepticism concerning the ability of game theory to transform the understanding of oligopolies. An oft-heard criticism was that game theory lacks the power of contributing to a generalizing theory of oligopolies.[98] The starting assumptions of a game-theoretic oligopoly model have direct consequences on the equilibrium outcome. As long as the collusive incentive outweighs the short-run profits of cheating, a great many equilibrium points can be sustained.[99] Industrial organization seems particularly beset with the problem of matching theories with available data to test it. The complex formal mathematical models based on game theory were difficult to validate empirically.[100]

Conclusions

Explicit and tacit collusion have similar economic effects in economic theory. However, the enforcement of law on the basis of explicit agreements between firms that can be empirically verified provides an amenable basis for legal action. Unlike explicit collusion the evidence for tacit collusion is more difficult to provide. This has meant that taking action against tacit collusion has been problematic for competition enforcers. In contrast to explicit agreements, the evidence of collusive practices has to be found in economic analysis of the oligopolists' behaviour.[101] The Chicago School of antitrust thought, which has dominated in the United States, is known for emphasising the role of economic analysis in enforcing competition policy. Nevertheless, it has had little result in the way of restricting the potential anticompetitive outcome of oligopolies. Instead, it focused on the models of perfect competition and monopoly to formulate enforceable legal rules. Game theory has provided a coherent framework for the analysis of oligopolistic interdependence. It has identified three basic conditions for tacit collusion to be sustainable: the possibility of coordination, the possibility of monitoring, and a credible retaliation mechanism. The modelling of oligopolistic settings with game theory has provided a number of characteristics that provide so-called stabilizing factors in the area of collusion. This has helped competition authorities to screen for markets that are likely to give rise to coordinated effects by collectively dominant combinations of companies.[102]

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[97] Robert W. Dimand, "Strategic games from theory to application", *History of Political Economy*, 32 (2000): 205.
[98] Fisher, "Games economists play" (1989).
[99] Jean Tirole, *The Theory of Industrial Organization* (Cambridge, MA: MIT Press, 1988), 246.
[100] Although it is suggested that progress is being made on that front. David S. Evans and Carsten Grave, "The Changing Role of Economics in Competition Policy Decisions by the European Commission during the Monti Years", *Competition Policy International*, 1 (2005): 147-8.
[101] Decker, *Economics and enforcement* (2009), 17.
[102] Oliver Budzinski, "Modern Industrial Economics: Open Problems and Possible Limits," in *Competition Policy and the Economic Approach: Foundations and Limitations*, ed. Josef Drexl, Wolfgang Kerber and Rupprecht Podszun (Cheltenham: Edward Elgar, 2011), 3.

Game theory provided both a metaphorical and a formal language to study oligopolistic interdependency. A number of narratives can be identified to explain the later break-through and eventually full acceptance of game theory in economics. One of these is the story of the success of game theory explained as a reaction against the dominance of Chicago antitrust.[103] Modern industrial economics generally assumes oligopolistic markets. By applying the principles of game theory, it has the ability to talk about oligopolistic interdependency in a way that the model of perfect competition or the model of monopoly has not achieved. Whereas in a perfectly competitive market competition is an anonymous force not perceived as rivalry by competitors, the oligopolists are aware of the interdependency with their actions and success thereof on the reactions of their competitors. In other words, market participants play a strategic game with each other.[104] This has allowed for novel narratives of anticompetitive behaviour by firms in oligopolistic markets. Game theory has been used to derive "possibility theorems" of unilateral anticompetitive practices in oligopolistic situations, such as the framework of "raising rivals' costs"[105] or the validation of credible predatory pricing strategies.[106] The rationale behind predatory pricing was rejected by the Chicago School, but was reintroduced by the incomplete information scenarios that game theory was able to describe.[107] Leniency programs for cartel defectors have been implemented increasingly, their merits being made more digestible by game theory. The modern analysis of vertical and complementary relationships, which relies on game-theoretic models, has called into question earlier strong presumptions.[108] In merger analysis, game theory has shown that oligopolistic mergers can have unilateral anticompetitive effects in heterogeneous markets even in the absence of dominance.

[103] Nicola Giocoli, "Three alternative (?) stories on the late 20th-century rise of game theory", *Studi e Note di Economia*, 14 (2009): 187-210.
[104] Budzinski, "Modern industrial economics" (2011), 1-2.
[105] Evans and Salinger, "Competition thinking" (2002), 512.
[106] Nicola Giocoli, "Games judges don't play: Predatory pricing and strategic reasoning in US antitrust", *Supreme Court Economic Review*, 21 (2013): 271-330.
[107] Luc Peeperkorn, "Competition Policy Implications from Game Theory: An Evaluation of the Commission's Policy on Information Exchange," *Workshop on Recent Developments in the Design and Implementation of Competition Policy*, CEPR/European University Institute (1996)
[108] Evans and Salinger, "Competition thinking" (2002), 513.

Chapter 3. Oligopolies under European competition law

In Europe, discussions regarding the possibility of enforcing restrictions on oligopolies have focused on which form of legal response would be appropriate. The approach of the European Commission and CJEU has been to focus on the concept of collective dominance as a proxy for the possibility of tacit collusion. It should be noted that by employing this approach, the European institutions have effectively excluded the use of the economic concept of tacit collusion and replaced it by the legal concept of collective dominance. This has broken the direct link between the legal category and its economic underpinning.[109]

A further consequence of the collective dominance approach has been a considerable amount of linguistic and definitional confusion. The relationship between the legal concept of collective dominance and the economic concept of oligopolistic interdependence has been a central issue in the development of the enforcement of competition rules applied to oligopolistic markets. The central problem is the difficulty of distinguishing oligopolistic interdependence from tacit collusion. The idea to include concerted practices under Article 85 came from France.[110] In France they already had experience with the prohibition of this type of behaviour in their national competition rules.[111] Scholars had diverging views on what could be defined as concerted practices. Different from the United States, where practices without evidence of explicit agreements came to fall under the Sherman Act, scholars argued that the concerted practices under European competition law fell outside the scope of Article 85.

In the 1960s, the European authorities were slowly becoming aware of the need to address the anticompetitive potential of oligopolistic markets. The High Authority of the European Coal and Steel Community, which would continue to exist until it merged with the European Commission in 1967, knew "that even a concentration whose share in each of the individual product markets is not unduly large can nevertheless endanger the maintenance of that minimum of competition which the Treaty insists and the Court confirms to be necessary, if it does not fulfil the general prerequisites for competition in an oligopolistic market."[112] However, the High Authority was more concerned with retaining ample discretionary space for enforcement in the coal and steel markets. Their awareness

[109] Ioannis Lianos, "'Judging' Economists: Economic Expertise in Competition Law Litigation. A European View," *CLES Workin Paper Series*, 1 (2009), 57

[110] Filippelli, *Collective dominance and collusion* (2013), 78.

[111] Art. 59-bis of the Ordonnance n. 45–1483, 30 June 1945, amended by the Décret 9 August 1953, mentions "les actions concertées, conventions, ententes *expresses ou tacit*" (emphasis added).

[112] High Autority of the European Coal and Steel Community, "Report on the High Authority's Policy Concerning Cartels and Concentrations" (submitted, with the Twelfth General Report on the Acitivties of E.C.S.C., for the consideration of the Internal Market Committee of the European Parliament, 1964), 33.

of the oligopolistic nature of these markets resulted not in the application of competition rules, but in declaring them insufficient for these specific markets.[113]

Following the outcome of a study done in association with a working group of professors,[114] the European Commission highlighted a number of issues regarding mergers. It recognized that a dominant position can be held even when market share is "comparatively small" in an oligopolistic market.[115] For the first time, the European Commission actively pursued the enforcement of oligopolistic concentration and parallel conduct. To this end, it initiated a number of investigations, first under Article 85, and later under Article 86. This enforcement approach had limited success. Only when, in 1989, the Commission received new powers in the form of a centralized merger regulation, the action against the anticompetitive potential of oligopolies came to fruition.

3.1 Article 85: a slow start

As the awareness slowly grew that the oligopoly problem also was a real issue in European competition regulation, lawyers turned to the existing legal instruments to remedy undesirable situations. The first attempts to engage with oligopolies were made under the cartel prohibition. The European Commission made use of the broad and vague formulations of Article 85 to strengthen their accusations. In the prohibition of "agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade", the Commission saw enough room also to make use of economic evidence regarding the behaviour of oligopolists, also when this was not based on hard evidence of explicit collusion. The courts appeared to accept the plus factors doctrine, which had been the US approach since the 1940s, where indirect evidence could supply sufficient proof.[116] However, in a series of cases that came before the court, the judges established that tacit collusion could not be addressed under the cartel legislation.

In the first case regarding the anticompetitive behaviour of oligopolists, the Commission found that there had been unlawful "concerted practice" between a number of dyestuffs producers. Although this was not a pure tacit collusion scenario (there was evidence that the accused had actually met on several occasions), the Commission argued that the existence of similar parallel

[113] See also High Authority of the European Coal and Steel Community, "C.E.C.A. 1952-1962: Résultats, Limites, Perspectives" (Rapport d'un comité d'experts présidé par M. le professeur Wagenführ, 1963), 357-358: "C'est pourquoi, il est important que le traité n'applique pas ces règles contre des limitations trop poussées de la concurrence par des ententes et contre des concentrations exagérées".
[114] The professors are only referred to as "*le groupe des professeurs*". European Economic Community, "Le problème de la concentration dans le marché commun" (Collection Études: Série concurrence n° 3, 1966).
[115] European Commission, "Concentration of firms in the Common Market" (Information Memo, European Economic Community, Official Spokesman of the Commission, 1966), 3.
[116] Filippelli, *Collective dominance and collusion* (2013), 82.

actions was evidence for the existence of concerted practice.[117] The accused parties appealed the Commission's decision and used circumstance of the oligopolistic nature of the market in which they operated as a defence against the accusations put forward by the Commission. According to the applicants, the fact that the dyestuffs market showed features of an oligopoly could actually explain that they had shown parallel behaviour. This, the applicants argued, was reason not to condemn their behaviour, since it was a natural market phenomenon. The Commission had erred in its decision by conflating the notion of "concerted practice" 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".[118]

In the end, the Court upheld the Commission's decision on the grounds that it had provided convincing evidence of explicit collusion. In its judgment the Court stated that although "parallel behaviour may not by itself be identified with a concerted practice, it may however amount to a strong evidence of such a practice if it leads to conditions of competition which do not correspond to the normal conditions of the market".[119] Whereas it ruled that there could be no conviction on the basis of alleged tacit collusion, the judgment presented considerable ambiguity with regards to the precise interpretation of concerted practices and coordination. This raised "concern that the notion of 'concerted practice' may not require any element of collusion and that any method of raising prices when there are only a few suppliers the market is risky."[120] The ambiguity of the judgment and the weakness of its economic analysis were criticized by Professor, later ECJ Judge, René Joliet, a staunch opponent of the tacit collusion doctrine under Article 85.[121] By introducing the notion of "normal conditions of the market", without explaining what normal conditions might be, the Court undermined the effectiveness of the "oligopoly defence" in future cases.

The Commission appeared to give up on its efforts to combat tacit collusion under Article 85 after the *Dyestuffs* judgment. Nonetheless, the Court made sure to emphasize in several subsequent cases the fact that conscious parallelism would not count as sufficient grounds for application of Article 85. In the *Sugar* case, it stated that this article is not meant to "deprive economic operators of the right to adapt themselves intelligently to the existing and anticipated conduct of their competitors".[122] By the 1990s, it seemed like the Commission had regained some confidence in addressing the issue. In the 1990 *Soda-ash* investigation, it renewed its efforts to fight tacit collusion

[117] Petit, "Oligopoly problem in EU" (2013), 290 (fn. 141).
[118] Case 54/69, SA française des matières colorantes v Commission (Dyestuffs) (1972), para 45.
[119] Dyestuffs, para 53.
[120] Valentine Korah, "Concerted Practices: The EEC Dyestuffs Case", *Modern Law Review*, 36 (1973): 221.
[121] René Joliet, "La notion de pratique concertée et l'arrêt ICI dans un perspective comparative", *Cahiers de Droit Européen*, 3 (1974): 285, cited in Petit, "Oligopoly problem in EU" (2013), 290.
[122] Joined Cases 40 to 48, 50, 54 to 56, 111, 113 and 114/73, *Coöperatieve Vereniging "Suiker Unie" UA and others v Commission (Sugar)* (1975), para 174.

under Article 85, explicitly stating that "there is no need for an express agreement in order for Article 85 to apply. A tacit agreement would also fall under Community competition law [g]iven the express prohibition in Article 85 against concerted practices".[123] The experts of the defendants had put forward a game-theoretic explanation of their conduct.[124]

The final nail was put in the coffin of the Article 85 approach to tacit collusion in *Woodpulp*. "[F]ollowing a proper economic analysis", the Commission found that the conduct of forty wood pulp producers "cannot be explained as independently chosen parallel conduct in a narrow oligopolistic situation", but could "be explained only by a concerted practice".[125] The parties appealed the decision. In its judgment, the Court - likely guided by Professor Joliet, who sat on the case as judge[126] - upheld the "oligopoly defence". Although the wood pulp market consisted of a large number of producers, forty of which were fined by the Commission, the judgment considered that it was composed of a "group of oligopolies" and that their conduct could be "satisfactorily explained by the oligopolistic tendencies of the market".

The economic reasoning of the Court appears "confused".[127] During the case proceedings, a large number of economic experts gave their opinion.[128] Indeed, such a large number of economists, offering different opinions that amounted to "a substantial body of economic argument … of manifest complexity", that it was deemed necessary to call on additional experts to compile the various opinions.[129] The effect of the judgment has been to make it "crystal clear" that Article 85 does not directly outlaw tacit collusion.[130] *Woodpulp* has made it clear that the Courts would not easily accept arguments based solely on economic theory to provide elaborate hypotheses to explain real-world behaviour.[131] This has made the Commission reluctant to rely too much on economic theory, without abundant legal evidence.[132]

3.2 Article 86: Some progress

Competition enforcement aimed at sanctioning abuse of collective dominance under Article 86 was haphazard, rather than based on consistently applied underlying theory. In contrast to Section 2 of

[123] Case No. IV/33.133, Soda-ash (1990), para 55. (The case was later annulled on procedural grounds. Case T-30/91, Solvay v Commission (1995).)
[124] *Soda-ash* (1990), para 44.
[125] Case No. IV/29.725, Wood Pulp (1985), paras. 82-83.
[126] Petit, "Oligopoly problem in EU" (2013), 292.
[127] Louis Kaplow, "On the Meaning of Horizontal Agreements in Competition Law", *California Law Review*, 99 (2011): 775.
[128] Opinion of Advocate General Darmon, *Woodpulp* (1992), para 331: "opinions drawn up by distinguished economists, Professors Budd, Hart, Jacquemin, Phlips and Von Weiszäcker".
[129] Opinion of Advocate General Darmon, *Woodpulp* (1992), para 333.
[130] Petit, "Oligopoly problem in EU" (2013), 292.
[131] Joined cases C-89/85, C-104/85, C-114/85, C-116/85, C-117/85 and C-125/85 to C-129/85, *A. Ahlström Osakeyhtiö and others v Commission of the European Communities* (*Woodpulp*) (1993).
[132] Decker, *Economics and enforcement* (2009), 136-7.

the Sherman Act,[133] the wording of the Treaty provided an entry for applying Article 86 to oligopolies.[134] This was further alluded to in the 1965 Commission Memorandum. Professor Joliet also argued that Article 86 would cover the collective dominance situation that could be brought about in tight oligopolies.[135]

In *Oil Companies* the Commission showed its first interest in applying the construct of collective dominance under Article 86 to restrict anticompetitive behaviour of oligopolists.[136] In its final decision regarding the conduct of the oil companies under investigation, the Commission recognized that it was "necessary to look at the behaviour of each company separately", and there was no mention of collective dominance.[137] Nevertheless, it had become quite apparent that the Commission was finding ways to apply a collective dominance measure to oligopolies, which was reaffirmed in several policy documents.[138] In 1986, the economists Erhard Kantzenbach and Jörn Kruse were commissioned to undertake a study on the concept of collective dominance in oligopolies.[139] The resulting study was used to underline the possibility to deal with the issue of tacit collusion by application of Article 86.[140]

A major development in allowing the application of a consistent framework to the prohibition of parallelism under Article 86 was the objective notion of abuse, which did not necessarily require proof of conscious or intentional conduct.[141] However, in the same judgment a firm stance was taken against the inclusion of tacit collusion in Article 86. The Court imported the same "oligopoly defence" that it had allowed under Article 85 enforcement, stating 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

[133] Cited *supra*, note 31.
[134] See *supra*, section 1.5 Substance of EEC competition regulation.
[135] René Joliet, *Monopolization and Abuse of a Dominant Position: A Comparative Study of the American and European Approaches to the Control of Economic Power* (The Hague: Martinus Nijhoff, 1970), cited in Petit, "Oligopoly problem in EU" (2013), 297.
[136] European Commission, "Report of 10 December 1975 on the behaviour of the oil companies in the Community during the period from October 1973 to March 1974" (COM 675, 1975), 7.
[137] Case No. IV/28.841, ABG/Oil companies operating in the Netherlands (1977), p. 9.
[138] Most notably in European Commission, "Sixteenth Report on Competition Policy" (Published in conjunction with the Twentieth General Report on the Activities of the European Communities 1986, 1987), paras. 331-333.
[139] Erhard Kantzenbach and Jörn Kruse, "Kollektive Marktbeherrschung: Das Konzept und seine Anwendbarkeit fur die Wettbewerbspolitik" (Report for the European Commission, Universität Hamburg, Institut fur Industrie- und Gewerbepolitik, 1987).
[140] European Commission, "Competition Policy 16" (1987), para 333: "Article 86 may be applied in order to punish such conduct".
[141] Case C-85/76, *Hoffmann-La Roche & Co. AG v Commission* (1979), para 91.

> conduct of the undertaking which derives profits from that position is to a great extent determined unilaterally.[142]

In *Alsatel*, the Commission asked the Court to give more guidance regarding the concept of collective dominance, wondering "whether parallel behaviour on the part of several independent undertakings … may place those undertakings collectively in a dominant position coming within the scope of Article 86 of the Treaty".[143] However, the Court stayed silent on the issue. Overall, the case law regarding corporate groups and the plurality or singularity of dominance remained ambiguous, but the Court had shown it would be willing to accept the same oligopoly defence that had so effectively undermined the enforcement under Article 86.[144]

Despite the dubious status of the doctrine, the Commission based its first case around the abuse of collective dominance in 1988.[145] In *Flat Glass* an important step was taken in the development of an approach towards the abuse of collective dominance. In the appeal to the decision of the Commission, the emphasis was put on the question whether the wording of Article 86 ("one or more undertakings") referred only to corporate groups, as the parties alleged,[146] whereas the Commission had been interpreting the law more widely. The Court of First Instance recognized that collective dominance is a different concept than corporate group dominance.[147]

In *TACA*, the Commission made use of academic economists to undertake an economic analysis and respond to the analysis of the parties.[148] The economic input that related to the competitive dynamics of the relevant market was important in the substantive arguments of the case.[149] However, there is also a perception that the actual decision was made on other grounds, despite the "mass of economic evidence".[150] In other cases, such as *Cewal*,[151] the emphasis was often heavily on legal evidence and not on detailed economic input.[152]

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[142] *Hoffmann-La Roche* (1979), para 39.
[143] Case C-247/86, Société alsacienne et lorraine de télécommunications et d'électronique (Alsatel) v SA Novasam (1988), para 21.
[144] Filippelli, *Collective dominance and collusion* (2013), 85-88.
[145] Case No. IV/31.906, Flat glass (1989).
[146] Joined Cases T- 68/89 and T- 77–78/89, Società Italiana Vetro SpA, Fabbrica Pisana SpA and PPG Vernante Pennitalia SpA v Commission (Flat Glass v Commission) (1992), paras 342-343.
[147] Having cleared up this interpretative issue, however, the CFI introduced a new concept that brought new uncertainty to the doctrine of collective dominance, by stating that it was required to show "economic links" between the undertakings. *Flat Glass v Commission* (1992), paras. 357-358.
[148] Case No IV/35.134, Trans-Atlantic Conference Agreement (1999).
[149] Decker, *Economics and enforcement* (2009), 136.
[150] Ibid., 141.
[151] Case No. IV/32.448 and IV/32.450, Cewal, Cowac and Ukwal (1993).
[152] Decker, *Economics and enforcement* (2009), 136.

3.3 Merger Regulation: at full speed

There had been centralized merger control in the European Coal and Steel Community, but not in the European Economic Community. The merger control of the ECSC was an instrument for monitoring the market structure, particularly of the steel industry in Germany, more than an instrument to ensure price competition.[153] The absence of this instrument in the Treaty of Rome was one of the largest divergences from the ECSC Treaty.[154] Only in 1989 was the European Community Merger Regulation (ECMR) introduced, which granted the European Commission extensive authority (and duty) to assess all qualifying mergers on their potential for anticompetitive outcomes.

The original EU Merger Regulation (Regulation 4064/89) did not refer explicitly to the possibility of joint dominance.[155] The Commission initially did not choose to employ merger control to regulate oligopolistic interdependence. The Commission's approach to dominance in merger control had focused exclusively on the possibility of the creation of a single dominant firm. Compared to national regimes this dissonance was conspicuous.[156] Several merger cases were assessed by the Commission without taking into account the possibility of joint dominance.

The blind spot of the European merger regulation towards oligopolistic dominance is remarkable. As shown, the Commission had paid substantial attention to the issue under the prevailing competition laws. Moreover, the outcome of the 1987 study, commissioned by the Commission, had explicitly recommended that the solution to the oligopoly problem could be found in merger control.[157] This position was enthusiastically repeated in the Commission's own reporting, stating its objective which "should be … to prevent situations arising which form a hotbed for tacit collusive behaviour. This is one of the objectives of the proposal for the prior control of mergers at Community level."[158] Nevertheless, it took several years until the Commission actively adopted a new stance on its enforcement towards joint dominance.[159]

The first attempts by the Commission to restrict oligopoly through merger control resulted in clearances with remedies, first in the *Nestlé/Perrier* (1992) merger case[160] and a year later in

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[153] Warlouzet and Witschke, "European competition policy" (2012), 440.
[154] Giocoli, "Early years of competition policy" (2009), 768 (fn. 67).
[155] Regulation 4064/89, Art. 2, para 3: "A concentration which creates or strengthens a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it shall be declared incompatible with the common market."
[156] Derek Ridyard, "Joint dominance and the oligopoly blind spot under the EC Merger Regulation", *European Competition Law Review*, 13 (1992): 161-4.
[157] Kantzenbach and Kruse, "Kollektive Marktbeherrschung" (1987), 146: "Wir empfehlen deshalb die Einführung einer Fusionskontrolle auch auf europäischer Ebene".
[158] European Commission, "Competition Policy 16" (1987), para 333.
[159] Ridyard, "Joint dominance blind spot" (1992), 163 suggests that this was "prompted by some sharp words from the German Bundeskartellamt", but I find this an unlikely reading of history, considering the evident awareness the Commission showed towards the issue earlier.
[160] Case No. IV/M.190, Nestlé / Perrier (1992)

Kali+Salz.[161] Especially the latter case provided interesting developments in the approach to collective dominance mergers. In *Kali+Salz*, the Commission used the infamous "Scherer/Ross checklist" to structure its economic analysis. Based on a classic textbook by Scherer and Ross (1990)[162], the Merger Task Force at the Commission had drawn up a checklist of unquantifiable criteria which it ran through fairly mechanically.[163] The Merger Task Force did not undertake careful economic analysis, but made use of this set of ad hoc tests. The list allegedly was "largely a restatement of factors facilitating collusion in the classic textbook by Scherer and Ross (1990)", contained claims that were "not well founded in economic analysis", and was contradicted by "[r]ecent economic theory".[164] More fundamentally, the list was used as a positive test for collusion, which it is argued is not allowed for by collusion theory. The Commission did not recognize the strong asymmetry between positive and negative tests for collective dominance. A positive effect that has been noted about the "checklist", is that the Commission established a "toughness" that could have a deterring influence on business that were inclined to think they could "bargain" their way out of merger issues.[165]

The European Court of Justice was asked to clarify whether the Merger Regulation could be applied to collective dominance. Advocate General Tesauro argued that the Merger Regulation was not suited for enforcement on the basis of a possibly collective dominant position.[166] He listed a considerable number of problems with this approach.[167] Unconventionally, in the judgment of the case the Court came to a different conclusion and upheld the Commission's viewpoint that the merger regulation could be applied to prevent collective dominance.[168] However, the Commission had provided insufficient evidence that the merger would effect a collective dominant position that

[161] Case No. IV/M.308, Kali + Salz / MdK / Treuhand (1993).
[162] Frederic M. Scherer and David R. Ross, *Industrial Market Structure and Economic Performance*, 3rd ed. (Boston: Houghton Mifflin, 1990).
[163] Kai-Uwe Kühn, "Closing Pandora's Box? Joint Dominance after the 'Airtours' Judgment," *The Pros and Cons of Merger Control (Swedish Competition Authority, Stockholm, 6 September 2002)*, 013 (2002)
[164] Kühn, "Joint dominance after Airtours" (2002), (18).
[165] Damien Neven, Paul Seabright and Robin Nuttall, *Merger in Daylight: The Economics and Politics of European Merger Control* (London: Centre for Economic Policy Research, 1993), 156-60.
[166] Joined cases C-68/94 and C-30/95, French Republic and Société commerciale des potasses et de l'azote (SCPA) and Entreprise minière et chimique (EMC) v Commission of the European Communities (France v Commission), Opinion of Mr Advocate General Tesauro delivered on 6 February 1997, para 78.
[167] The Merger Regulation does not explicitly refer to collective dominance; market shares less than 25 per cent are generally supposed to be allowed; collective dominance was discussed during the drafting of the Regulation but not included; collective dominance would be a structural problem that the Commission would not be able to enforce effectively; there are no procedural guarantees for companies that are not involved in the merger but are suspected of being part of the post-merger collusive oligopoly. Filippelli, *Collective dominance and collusion* (2013), 101.
[168] Joined cases C-68/94 and C-30/95, French Republic and Société commerciale des potasses et de l'azote (SCPA) and Entreprise minière et chimique (EMC) v Commission of the European Communities (France v Commission), Judgment (1998), para 165.

was “liable to impede significantly effective competition”.[169] The Courts stressed that to establish that collective dominance will occur it is necessary to show that the oligopolists will significantly impede competition following the merger through common policy that can be adopted “to a considerable extent independently”.[170] The Court urged the Commission to apply a more dynamic approach to the economic analysis of oligopolies. Essentially, the approach of the Commission was along the lines of the first Kantzenbach study it had mandated on the workings of oligopolistic markets, which had relied mainly on static analysis of oligopolies.[171] The later study,[172] which had been updated with novel findings grounded in the dynamic game theory, was completed only after the Commission’s decision in *Kali+Salz*.[173] The approach that the Commission took in this case clearly differed from the insight that the second study gave into the dynamics of oligopolistic markets.

Gencor/Lonrho was the first merger that was prohibited by the Commission on the grounds of post-merger coordination. In *Gencor v Commission*, the Court upheld for the first time the Commission’s decision to prohibit a merger on the ground of collective dominance. Notably, the Court stated explicitly that “there is no reason whatsoever in legal or economic terms” to show additional economic structural or contractual links between the parties beyond mere oligopolistic interdependence to find collective dominance.[174] It is still necessary however to provide sufficient evidence that the likelihood that firms will tacitly collude post-merger is high (or low, if the merger is approved). Convincing the Courts of this likelihood has proven to be particularly problematic for the Commission.[175] After the Gencor judgment the Merger Task Force aggressively expanded its use of joint dominance as a means to prohibit mergers. This newfound assertiveness was criticized by academic economists, who lamented that the standard of proof was unreasonably low and lacked established theory and empirical method. Apparently, the Commission had not truly learnt from the thorough criticism that the Court had provided in *Kali+Salz*.

In another case, the Commission took the unusual measure of employing an external economist to present an alternative economic analysis regarding the unilateral effects of an intended

[169] *France v Commission*, Judgment, para 249.
[170] *France v Commission*, Judgment, para 221.
[171] Kantzenbach and Kruse, "Kollektive Marktbeherrschung" (1987).
[172] Erhard Kantzenbach, Elke Kottmann and Reinald Krüger, "New Industrial Economics and Experiences from European Merger Control: New Lessons about Collective Dominance?" (Study prepared on behalf of the European Commission Directorate-General for Competition, HWWA Hamburg Institut für Wirtschaftsforschung, 1995).
[173] James S. Venit, "Two Steps Forward and No Steps Back: Economic Analysis and Oligopolistic Dominance After Kali&Salz", *Common Market Law Review*, 35 (1998): 1117-20.
[174] Case T-102/96, Gencor Ltd v Commission of the European Communities (Gencor v Commission) (1999), para 276.
[175] Decker, *Economics and enforcement* (2009), 33-34.

merger.[176] The novel merger simulation study was carried out by Ivaldi and Verboven, but eventually those results were not used by the Commission.[177]

3.4 Airtours

The circumstances that the Airtours case presented were uncommon for the application of oligopoly control by the Commission on a number of accounts. First of all, the market concentrations in the case differed from previous instances. All the merger cases to which the Commission had applied the collective dominance standard until then had concerned a duopolistic outcome of the merger. With Airtours, the post-merger situation would be a market with three players. Secondly, the history of the industry indicated that it concerned a dynamic market, where there had been a considerable amount of exits, entries and shares variability of suppliers. Finally, package holidays, the product that the market players offered, are a product of differentiated nature, wholly unlike homogeneous products that had been at issue in earlier collective dominance cases, such as potash (*Kali+Salz*), bottled water (*Nestlé/Perrier*) or platinum (*Gencor/Lonhro*).[178]

One of the reasons that the Commission had decided to investigate in-depth the merger was to test the robustness of the dominance provisions of the European Commission Merger Regulation. It was also intended to discover to what extent the concept of non-coordinated behaviour could be applied.[179]

The conclusions that the Commission drew from their economic analysis applied to the unconventional scenario of Airtours also showed some unorthodox traits. It appeared that the Commission was reaching its decisions on the assumption that something that *could*, according to their economic theories and models, happen, *would* happen.[180] The Commission employed a novel interpretation of economic theory regarding the requirement of a retaliation mechanism to sustain tacit collusion between oligopolists. According to the Commission, "it is not necessary to show that there would be a strict punishment mechanism".[181] This interpretation challenged the established theory in economics.[182] In the same paragraph of the decision, the argument is made that "[w]hat matters for collective dominance" is whether "it is rational for the oligopolists to restrict output, and … reduce competition… ".[183] Earlier in the decision, the Commission had already laid out its

[176] Case No IV/M.1672, Volvo/Scania (2000), para 72.
[177] Oliver Budzinski and Isabel Ruhmer, "Merger simulation in competition policy: A survey," *Working Paper*, No. 82 (2009), 36-7
[178] Andrea Lofaro and Derek Ridyard, "The Economic Analysis of Joint Dominance under EC Merger Regulation", *European Business Organization Law Review*, 2000: 551-2.
[179] Decker, *Economics and enforcement* (2009), 113 (fn. 23).
[180] Evans and Grave, "Changing role of economics" (2005), 149.
[181] Case No IV/M.1524, Airtours/First Choice (*Airtours*) (1999), para 150.
[182] Decker, *Economics and enforcement* (2009), 119.
[183] *Airtours* (1999), para 150.

perspective on the factors that facilitate collective dominance, with the following remark being particularly curious.

> Nor does [the Commission] regard a strict retaliation mechanism … as a necessary condition for collective dominance in this case; where, as here, there are strong incentives to reduce competitive action, coercion may be unnecessary.[184]

This argument shows a remarkable divergence from an economics perspective. That all businesses would benefit from a reduction of competitive pressure can be considered a truism. The whole point of an economic assessment of the behaviour of competitors is to establish whether they *are able* to suppress competition through a coordinating mechanism.[185] In this case, the Commission apparently "decide[d] to diverge … from the interpretation prescribed by economic theory".[186] Without a retaliatory mechanism and in a dynamic market with heterogeneous products, economic research would say, this is not feasible. The viewpoint of the Commission has been understood as "a complete denial of the concept of game theory".[187]

In its dismissal of the prohibition of the Airtours/First Choice merger, the General Court held that the Commission's argumentation and substantiation of the economic assessment was strewn with errors and insufficiently supported with evidence.[188] While there was a shared understanding of the theoretical underpinnings of collective dominance, the Commission had failed to convincingly argue that their conclusions were the necessary results of the premises.[189] The Court stated that "the Commission made errors of assessment concerning the development and predictability of demand, demand volatility and the degree of market transparency".[190]

Accompanying its sharp criticism of the economic assessment by the Commission, the Court provided a coherent account of its own view of the economics of collective dominance. For the first time, the Court explicitly addressed the concepts "tacit coordination" and "tacit collusion".[191] The Court established that three basic conditions are necessary for finding collective dominance: each member of the dominant oligopoly must be able to monitor each other's behaviour to know whether or not they are adopting the common policy (market transparency); there has to be sufficient

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[184] *Airtours* (1999), para 55.
[185] Lofaro and Ridyard, "Analysis of joint dominance" (2000), 556.
[186] Sigrid Stroux, "Collective dominance under the Merger Regulation: A serious evidentiary reprimand for the Commission", *European Law Review*, 27 (2002): 745.
[187] Etter, "Assessment of mergers" (2000), 136.
[188] Case T-342/99, *Airtours v Commission* (2002), para 294.
[189] Evans and Grave, "Changing role of economics" (2005).
[190] *Airtours v Commission*, para 181.
[191] E.g., *Airtours v Commission*, paras. 62 and 111.

incentive not to depart from the common policy to be able to sustain the situation of tacit collusion over time (retaliation); and the foreseeable reaction of current and future competitors and customers must not jeopardise the expected results of the collusion.[192] The decision of the CFI is seen to constrain the extent to which the Commission is allowed to apply novel interpretations of economic theory.[193] Moreover, it is viewed as having brought the concept of collective dominance "into line with the findings of non-cooperative game theory".[194]

Conclusions

The enforcement of competition policy to remedy anticompetitive oligopolies under European law has followed a long and winding path. Multiple attempts were undertaken by the European Commission to address the issue under Article 85, concerning cartels, and Article 86, concerning abuse of dominance. The various challenges that the Commission has faced during this endeavour were predominantly of a legal (as opposed to economic) nature. The Courts have repeatedly shown a proclivity of restricting the Commission's mandate and discretionary space. The Commission has struggled with finding a textual interpretation that would be allowed by the Courts. As a consequence, its approach has been haphazard and has not resulted in a consistent framework, neither in a legal sense nor based on a coherent economic method.

The introduction of the Merger Control Regulation in 1989 was a watershed moment in the history of European competition policy. It provided the basis for a new approach to addressing the issue of oligopolies. The concept of "collective dominance" has been productively applied in many merger cases. Moreover, the ample amount of merger cases has provided the Commission the opportunity to gain experience in supplying sufficient economic reasoning to substantiate their analyses. However, the approach taken by the Commission was for a long time mechanistic and based on static models of oligopoly. The fact that the Court confirmed the legitimacy of applying the Merger Regulation to cases of "collective dominance" strengthened the confidence of the Commission.

The climax of this episode occurred in the *Airtours* case. The Commission prohibited a merger between two operators, who were active on a dynamic, four-player market with differentiated products: according to game theory, characteristics that reduce the likelihood of sustainable tacit collusion. This deviation from the prescriptions of game theory is remarkable, because in other cases the Commission and the Court had shown a number of times that it had a considerable understanding of the game-theoretic approach to oligopolies. Even more remarkable was the claim

[192] Airtours v Commission, para 62.
[193] Decker, *Economics and enforcement* (2009), 119.
[194] Ibid., 162.

in this case by the Commission that it was not necessary to have a retaliation mechanism to sustain tacit collusion. The retaliation mechanism has been shown by game theory to be an essential component of (tacit) collusion and this had also been a central finding in a study on industrial economics and merger control that was undertaken on behalf of the Commission. On appeal, the Court recognized the flaws in the decision and explicated three necessary conditions for finding collective dominance, echoing almost literally the results of other studies that since then had been undertaken for the Commission.

The concept of collective dominance can be considered as an exemplar of the translational interaction between legal and economic thought. While it is clearly linked to the economic concept of tacit collusion, a separate linguistic formulation was used to engage with the issue of oligopolies in a legal setting. The notion of collective dominance has no meaning in economics, and the terms tacit collusion are sparsely used in case law. At the one hand, lawyers use the connection of their own body of knowledge to that of the more “objective” and “scientific” epistemology of economics to add further legitimacy to their discipline and their praxis. This might be particularly valuable because of the perceived political nature of competition policy. On the other hand, law does not simply adopt economic concepts *as is*. The translation into a new concept, such as collective dominance, reveals a hybrid language that cannot be claimed by either the legal or the economic epistemological community. As such, it reinforces the status of competition law as an independent discipline.

Chapter 4. A more economic approach

The Airtours judgment was not the only critical judicial appraisal of the Commission's approach to merger assessments. In the same year, two other mergers decisions were annulled by the Court of First Instance: *Schneider Electric* and *Tetra Laval*.[195] The Commission had blocked the *Tetra Laval* merger because of concerns that it would allow the combined enterprise a leveraged dominant position. The court did not reject this theory, but did reject the Commission's decision on the grounds that it had not provided the factual likelihood of this effect.[196] The Court declared that the Commission had failed to provide an analysis of such kind that "would have been indispensable to enable the Court to determine" the likelihood of specific economic behaviour.[197]

The impact of this "merger trio" has been rather dramatic, the year 2002 going down in history as the *annus horribilis* of the Directorate-General for Competition of the European Commission.[198] All three of the exceptionally negative judgments had in common that they focused on – and condemned – the economic argumentation that the Commission had provided to substantiate their allegations. Two weeks after the last of the three judgments had been publicized, Commissioner for Competition, Mario Monti, the first economist to hold this position after a long string of lawyers and (the occasional) political scientists, presented an overview of the "process of substantial reform of our enforcement mechanisms and of rethinking of some of our substantive rules", with the aim of "strengthening the role of economic analysis".[199] Monti had already made the "more economic approach" a priority when he took office and this intention was amplified after the "merger trio".[200]

4.1 Modernization of European competition law

Modernization of European competition law, both of substantive and procedural elements, has been the focus of attention since the late 1990s. The procedural modernization was proposed in the form of the modernization package.[201] The most fundamental procedural proposal was the

[195] Case T-310/01, *Schneider Electric SA v Commission* (2002); Case T-5/02, *Tetra Laval v Commission* (2002).
[196] This theory would have been rejected by the Chicago School, who held that dominance could not be leveraged, David S. Evans and Jorge Padilla, "Designing Antitrust Rules for Assessing Unilateral Practices: A Neo-Chicago Approach", *University of Chicago Law Review*, 72 (2005): 79.
[197] Tetra Laval, para 213.
[198] E.g., Anne C. Witt, *The More Economic Approach to EU Antitrust Law* (Oxford: Hart Publishing, 2016), 27-33.,Weitbrecht, "Freiburg to Chicago" (2008), 85.,Tony Reeves and Ninette Dodoo, "Standards of Proof and Standards of Judicial Review in European Commission Merger Law", *Fordham International Law Journal*, 29 (2006): 1035.
[199] Mario Monti, "EU Competition Policy" (Speech at the Fordham Annual Conference on International Antitrust Law & Policy, New York, 31 October 2002, SPEECH/02/533, available at http://europa.eu/rapid/press-release_SPEECH-02-533_en.htm, 2002).
[200] Witt, "Airtours to Ryanair" (2012), 217.
[201] Céline Gauer et al., "Regulation 1/2003 and the Modernisation Package fully applicable since 1 May 2004" (Competition Policy Newsletter, Number 2 - Summer 2004, Directorate-General Competition, units A-3 and A-4, 2004), 1-6.

decentralization of competition enforcement and increased cooperation between national authorities and the Commission. The substantive modernization, which went hand-in-hand with the aims of the procedural proposal, has become known as “the more economic approach”.[202]

An important source of the pressure to modernize the European competition law was what Gerber has dubbed the “transatlantic competition law group”: a loose group of competition lawyers, law officials, and some academics from the U.S. and Europe. This group took shape in the mid-1990s, when a number of influential transatlantic competition law conferences, such as the Fordham International Antitrust Law and Policy Conference and the EUI competition law conference, started to take interest in transnational competition law enforcement issues.[203]

A number of possible motivations have been identified for the pressure to modernize the European system of competition law enforcement. There were complaints that the Commission was too powerful and their procedures too formalistic and complex. For example, to control their workload the Commission had introduced numerous block exemptions and other formal criteria for the assessment of violation of Article 85.[204] This was necessary because the notification system produced enormous amounts of administrative duties for the Commission. Another desire which was often expressed was to remedy the divergence between American and European antitrust practices; a commonly held opinion was that the economization of European competition law would contribute to this aim.[205]

The discussions resulted in the DG Comp White Paper on procedural modernization in April 1999 and the Commission proposed regulation in September 2000, which finally was passed as Regulation 1/2003.[206] This eliminated the notification requirements for agreements under Article 85 and the monopoly on exemptions under Article 83. Furthermore, it laid the basis for a much larger role for national authorities, who would be primarily responsible for competition enforcement for national issues. The national authorities were organized in a network of officials presided by the

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[202] Witt, *More economic approach* (2016).,Dieter Schmidtchen, Max Albert and Stefan Voigt, eds., *The More Economic Approach to European Competition Law* (Tübingen: Mohr Siebeck, 2007).

[203] David J. Gerber, "Two forms of modernization in European competition law", *Fordham International Law Journal*, 31 (2008): 1240-1.

[204] Gerber, "Two forms of modernization" (2008).

[205] John Vickers, "Competition Law and Economics: A Mid-Atlantic Viewpoint", *European Competition Journal*, 3 (2007): 1-15.,Gunnar Niels and Adriaan ten Kate, "Introduction: antitrust in the U.S. and the EU - converging or diverging paths?", *Antitrust Bulletin*, 2004: 1-27.,Hwang Lee, "Influencing a Global Agenda: Implications of the Modernization of European Competition Law for the WTO", *Erasmus Law and Economics Review*, 1 (2004): 111-41.,Allan Devlin and Michael Jacobs, "Antitrust divergence and the limits of economics", *Northwestern University Law Review*, 104 (2010): 253-91.,Lorenzo Coppi and Mike Walker, "Substantial convergence or parallel paths? Similarities and differences in the economic analysis of horizontal mergers in U.S. and EU competition law", *The Antitrust Bulletin*, 2004: 101-52.

[206] European Commission, "White Paper on Modernisation of the Rules Implementing Articles 85 and 86 of the EC Treaty" (Commission Programme No 99/027, 1999); Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty.

Commission. Finally, the modernization also included the far-reaching dimension that European competition law would take precedence in all issues, thus effectively making the different national competition laws inapplicable to the extent that they were different from European law. This was particularly significant in Germany, whose well-developed competition law system would lose much of its role and importance.[207]

Early advocates of the idea that competition law in Europe should shape itself after the American antitrust that was revolutionized by the law and economics movement initially found little support. Slowly, however, the idea began to gain more traction. The substantive modernization first took off with the proposal by the Commission for new guidelines on vertical restraints in 1997, followed by similar guidelines related to horizontal agreements in 2001, merger regulation in 2002. The final step was to release a new approach to the assessment of unilateral conduct. In 2005, the Commission released a Discussion Paper to test the waters. Only in 2009 was the Guidance on Commission enforcement priorities in applying Article 86 to exclusionary conduct by dominant firms made official.

The view that it was necessary to modernize the substance of European competition law was partially driven by a similar narrative that was employed for the procedural process. The success of the procedural transition was also encouraging for the Commission to go through with the substantive modernization. Moreover, the procedural modernization required that the principles of competition law be transmittable across different national legal systems. According to Gerber, the neo-classical economics provided a "consistent methodology and a language that is used and applied by most economists throughout the world. This coherent package thus represented an intellectual framework for achieving consistency".[208]

A more pragmatic step in the developments of the more economic approach was the establishment of the office of Chief Competition Economist in 2003. Around the time of the modernization proposals case teams typically would not include a dedicated economist. The Commission at the time had a shortage of economists in general and particularly industrial economists.[209] In 2005, the first Chief Competition Economist, Lars-Hendrik Röller, reported that approximately 200 out of the 700 officials at DG Comp had an economics background, twenty of whom holding a PhD in economics. Out of those twenty PhDs ten work in the Office of the Chief

[207] Gerber, "Two forms of modernization" (2008), 1243.
[208] Ibid., 1258.
[209] Decker, *Economics and enforcement* (2009), 110.

Competition Economist, each specialized in Industrial Organization. Together the ten form the Chief Economist Team.[210]

The economic analysis in the case of a merger consists of drawing a conclusion about the economic consequences of the merger. This task can be divided into two components: the application of interpretive tools and the determination of the factual material (data) to be considered.[211] The two components are related. The Court is only able to apply its analysis to data that is made available within the litigation. As a consequence, the question whether this data is considered to be sufficient, convincing, or legitimate factual material is contingent on the interpretive tools or framework that is employed.[212] In these early stages of merger proceedings the use of economic theory is superficial. As an official at the Commission describes it "over the years lawyers have developed easy rules of thumb, and now we are seeing the same tendency with economics."[213] If a merger investigation is taken to Phase II there is commonly an economist of the Chief Economist's Team involved with the construction of the case. In the earliest years of the Chief Economist this was not necessarily the case, as the role of these specialized economists was interpreted to be particularly relevant only in important cases that could have an impact on policy.[214] However, the Commission also frequently relies on the economic data and analysis provided by the merging parties or complainants. The economists who undertake these investigations in Phase II of merger cases are typically appointed and instructed by lawyers acting on behalf of the parties.[215]

4.2 Post-Airtours

In its 2001 Green Paper, the Commission explained that since the adoption of the Merger Regulation in 1989 it has "adapted both to developments in economic theory and to refinements of the now available econometric tools". This has deemphasized its use of the "rather blunt and imprecise market share test".[216] The Commission itself mentions *France v Commission* and *Gencor* as two exemplary cases of "this evolution", where the courts applied the adapted interpretation to

[210] Lars-Hendrik Röller, "Economic Analysis and Competition Policy Enforcement in Europe," in *Modelling European Mergers: Theory, Competition Policy and Case Studies*, ed. Peter A. G. van Bergeijk and Erik Kloosterhuis (Cheltenham: Edward Elgar, 2005), 14.
[211] David J. Gerber, "Courts as Economic Experts in European Merger Law," in *Annual Proceedings of the Fordham Corporate Law Institute: International Antitrust Law & Policy* , ed. Barry E. Hawk (Huntington, NY: Juris Publishing, 2004), 2003:477, 475-94.
[212] Ibid., 478.
[213] Decker, *Economics and enforcement* (2009), 112.
[214] Ibid., 114.
[215] Ibid., 116.
[216] European Commission, "Commission Green Paper on the Review of Council Regulation (EEC) No 4064/89" (COM 745/6, 2001), para 163.

situations of collective dominance.[217] A new merger control system was completed in 2004 in the form of the Guidelines on the assessment of horizontal mergers, which stressed the need for an economic analysis of the intended merger. The sources on the basis of which the Commission formulated its arguments are not always clear. For example, in *Airtours v Commission* the Court discovered that Commission had relied on a single-page extract of a market study and that the Commission was not able to produce the econometric study which it allegedly had used in its analysis.[218] The complex economic assessments that are invoked in cases need more significant substantiation than the Commission was disposed to give.[219] This sentiment is pronounced by two opinions of Advocate Generals of the ECJ, who noted that "it [is] necessary for the Commission to substantiate the effects …; it cannot simply rely on the surmise, hesitantly expressed, that 'this factor could reduce transparency in the market and may make tacit collusion more difficult'"[220]and "that the Commission enjoys broad discretion … does certainly not mean … that it is not required to give a full statement of reasons for its decision".[221]

In *Airtours* and subsequent judgments, the courts demanded a game-theoretic analysis of collusion and linked the concept of collective dominance to the notion of tacit collusion. The unilateral non-collusive effects that the Commission had included were excluded by the courts.[222] The courts also demanded a higher standard of proof. The track record of the Commission since the "more economic" reforms has not been flawless. After the *Airtours* judgment, the Commission has explicitly framed their assessment in terms of these three criteria only in a limited number of decisions.[223] The *GE/Honeywell* case, stated to be firmly rooted in law and economics, displays several ways in which the Commission failed to take into account fully the contributions of economics. Some of the Commission's arguments can be interpreted as ordoliberal views, as regards the idea that harm to competitors necessarily leads to harm to competition.[224] In the *Exxon/Mobil* case, the Commission for the first time in a merger case concerning collective dominance took the measure of employing an external economist to present an alternative economic analysis, rather than only the analysis and evidence presented by the parties.[225] The theory was presented that the

[217] European Commission, "Green Paper" (2001), para 164.
[218] Airtours v Commission, paras. 128, 132.
[219] Decker, *Economics and enforcement* (2009), 148-9.
[220] Case C-413/06P Bertelsmann AG and Sony Corporation of America v Independent Music Publishers and Labels Association (Impala), Opinion of Advocate General Kokott delivered on 13 December 2007, paras. 128-130.
[221] Case C-12/03 P Commission of the European Communities v Tetra Laval BV Opinion of Mr Advocate General Tizzano delivered on 25 May 2004, para 87.
[222] Filippelli, *Collective dominance and collusion* (2013), 122.
[223] Decker, *Economics and enforcement* (2009), 68 (fn. 50).,Filippelli, *Collective dominance and collusion* (2013), 121.
[224] Evans and Salinger, "Competition thinking" (2002), 520.
[225] Case No IV/M.1383, Exxon/Mobil (1999).

coordinated behaviour would occur in the strategy of capacity installation, rather than in output or prices. This was one of the rare occasions where sophisticated analysis was presented by the Commission as well as the merging parties, consisting of economic models of capacity expansion.[226] In *Sony/BMG*, the Commission was criticized severely, again, by the Court. According to the Court the data prepared by the economic advisers to the mergeable parties appeared to be unreliable.[227] The economic technique that the Commission employed, as it does frequently, was to refer to an economic factor and use this to make inferences or predictions about how this will influence the incentives for coordinated behaviour or to formulate a theory of harm.[228] Supportive analyses for these inferences, predictions, and theorizations are not given. This practice was heavily criticized in *Sony/BMG*, where the economic assessment by the Commission was described as "extremely succinct", "superficial, indeed purely formal", "unsubstantiated", "vague assertions, which fail to provide the slightest detail", and "imprecise, unsupported, and indeed contradicted by other observations in the Decision".[229]

Conclusions

The substantive modernization of European competition policy included two components: narrowing of the goals of competition law to the goals of consumer welfare, and (re)defining the methodology to achieve this singular goal through the perspective of neo-classical economics. This change is much more significant than a gradual shift towards relying more on the instrumental use of economic analysis as a support tool. Economics had long been used as an ad hoc analysis of facts or consequences. The "more economic approach" announced a fundamental change, where (neo-classical) economics in itself would provide the norms and goals of competition law.[230] In this sense, it has been argued that the "more economic approach" is not really about more economics as an instrument. Instead, it appears rather to refer to a shift in the interpretation of the legal objective of EU merger law to the optimization of consumer welfare, emulating a similar transition that had occurred in the US in the 1970s and 1980s.[231] Moreover, the analysis of the history of oligopoly case law in Europe has provided considerable indication that the translational efforts between the "legal language" and "economic language" had been set in motion long before the formal announces of an effort towards a "more economic" approach.

[226] Decker, *Economics and enforcement* (2009), 115-23.
[227] Impala v Commission, para 345
[228] Decker, *Economics and enforcement* (2009), 70-1.
[229] Case T-464/04, Independent Music Publishers and Labels Association (Impala) v Commission of the European Communities (2006), paras. 525, 528, 294 289, 320.
[230] Gerber, "Two forms of modernization" (2008), 1247.
[231] Witt, "Airtours to Ryanair" (2012), 244.

Conclusion

Summary of findings

Ordoliberals views on the mutual dependence of law and economics form the foundational basis from which European competition policy developed. Protecting the fragile competitive process required a fine balance. On the one hand, the role of competition law was to protect the competitive process from excessive market power. On the other hand, the economic constitutional framework had to restrict harmful government intervention. In this sense, the ordoliberal influence on the development of European competition law was to allow for meaningful and valued communication between the two distinct epistemological communities of law and economics.

From the very first competition case forward, both the European Commission and the European courts have shown willingness to engage with each other over economic theory and interpretation. The enforcement of competition policy to remedy anticompetitive oligopolies under European law has followed a long and winding path. The introduction of the Merger Control Regulation can be seen as a milestone, as it provided the basis for the "collective dominance" approach to addressing oligopolistic collusion. In the refinement of this approach, both the Courts and the Commission can be seen to have acted as economic experts. The effectiveness of the collective dominance approach boosted the confidence of the Commission. When this developed into a laxness with regard to the precise application of economic theory, the courts relied on their own economic expertise to reject the economic analysis of the Commission. Cases such as the "merger trio" clearly paint this picture of the courts as an economic expert, where the courts took on the task of assessing economic causality, stepping beyond the application of legal categories and concepts.

While it is difficult to understate the impact of the Chicago School on antitrust thinking, it appears that its effect on competition law enforcement in Europe has initially been marginal. The announcement of the "more economic" approach by the European Commission can be seen in the light of a shift towards consumer welfare-based, "Chicago", competition policy. Its soft position regarding oligopolistic collusion, and other potentially anticompetitive conduct, arguably has been a stimulus for the development of a game-theoretic approach to competition economics. Game theory has provided a coherent framework for the analysis of oligopolistic interdependence, which has been appropriated by competition lawyers for its substantial prescriptions as well as its metaphors and narrative.

The hybrid language of economic and legal narratives

Generally there is little use of sophisticated economic modelling or econometric analysis. The empirical methods that could be applied are seen to be impractical or too complicated to be of use in proceedings. Much of the academic research that is relevant to these issues is centred on abstract and formal models. Economics functions as a frame for the interpretation and "foundation" of law. The main use of economics in the enforcement of competition law regarding oligopolies is in the form of economic narratives. A major role of economists in these cases is to develop intuitive and persuasive stories. The ability to present a persuasive story to the court is seen to be decisive in the outcome of cases.[232] In appeals such as *Airtours* and *Impala*, the European Court of Justice has made it clear that the story the Commission tells has to be substantiated by adequate facts. This opinion is echoed by academics, such as in the report commissioned by the European Commission which states that "[the Commission's theory of harm] should be both based on sound economic analysis and grounded on facts. In particular, since many practices can have pro- as well as anticompetitive effects, merely alluding to the possibility of a story is not sufficient."[233]

Game theory has been influential in the reasoning by academic economists about economic behaviour by introducing the metaphor of the game. This has enabled a new conceptual language of describing economic processes and the decisions that economic actors make. It has introduced into law such economic concepts as "asymmetry", "retaliation", and "homogeneity". These concepts have a meaning economic theory that has become a part of the common language of law and economics. However, there is also a fundamental difference to be observed between how the law uses the game theory metaphor and how economics uses the metaphor. In economic research the game theory metaphor is primarily used to investigate the *effects* of coordinated behaviour and the equilibrium that will result. The legal issues, on the other hand, focus on the *process* of coordination: how and when firms will coordinate their behaviour. In other words, economists focus on describing equilibria whereas lawyers discuss *changes* in equilibria.[234]

The development of game theoretic modelling has allowed for a new discourse on the strategic behaviour of firms. Game theory is grounded in interpretation and contextualization of rules by form of narrative.[235] Legal proceedings seem particularly appropriate examples of extensively establishing such narratives. The new narratives have produced new normative standards on acceptable practices. The new standards eventually manifest themselves in a legal context as well. The game metaphor and its new conceptual language that this offers have been co-opted by legal

[232] Decker, *Economics and enforcement* (2009), 122.
[233] Jordi Gual et al., "An economic approach to Article 82" (Report by the EAGCP, 2005), 13.
[234] Decker, *Economics and enforcement* (2009), 171.
[235] Mary S. Morgan, *The World in the Model: How Economists Work and Think* (Cambridge: Cambridge University Press, 2012), 361ff, 367.

professionals. The contribution of game theory has been to provide a new language to understand conflict, competition, collusion and cooperation.[236] Firms operating in an oligopolistic market are likened to players in a non-cooperative game, facing similar choices regarding future behaviour. Through this similarity, the hybrid talk of economic and legal language can be used to describe the behaviour of oligopolists as economic actors. This language is used in decisions and judgments, which leads to statements such as: "any equilibrium between the producers is disturbed by the arrival of additional capacity",[237] and "a strict retaliation mechanism ... is a necessary condition for collective dominance".[238] This hybrid style of talk between the two disciplines of law and economics should be welcomed. It accommodates an evolving and interactive relationship between separate epistemological communities.[239] Economics has also provided a source of legitimacy to the enforcement process. It has allowed the Commission and the Courts to connect the legal framework to a much larger body of knowledge, the "scientific" knowledge of economics. The political nature of competition law makes this legitimization on the basis of "objective" social science all the more relevant.

Competition theory and policy has opened a new era where game theory scholars could "profitably (even in a literal sense…) apply their expertise" and promote their discipline's diffusion.[240] Competition issues were opportunities for game theory, after three decades of relative uselessness, to prove its applicability. It seems more or less inevitable that there will always be some degree of discrepancy between the arguments produced by economic science and the reality of the prevailing competition rules. Legal arguments have been viewed as the result of out-dated economic ideas that have survived in competition law or as a simplistic substitute for more sophisticated economic analysis. A common response to this has been to call for the introduction of "more accurate" economic analyses to bridge the gap between modern industrial organization and competition law.[241] To a large extent, however, it appears as if the historical development of the interaction between the expert communities of law and economics has, in the case of competition law, produced an appropriate style to deal with their epistemological differences and parallels. This descriptive technique, based on a mix of legal and economic concepts, should be seen as a hybrid language, which combines the use of theory, facts and values, and is adapted specifically to cope with the complex reality of oligopolies.

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[236] Martin Shubik, "Game theory, law, and the concept of competition", *University of Cincinnati Law Review*, 60 (1992): 300.
[237] Case No. IV/ECSC 1342, Outokumpu/Avesta Sheffield (2000), para 34.
[238] *Airtours* (1999), para 55.
[239] Lianos, "Theory of economic transplants" (2009), 404.
[240] Giocoli, "Rise of game theory" (2009), 200.
[241] Roger van den Bergh, "Modern industrial organisation versus old-fashioned European competition law", *European Competition Law Review*, 17 (1996): 75-87.

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