1. Introduction

The enforcement of European competition law has the potential to affect all European businesses and consumers. Any European who drives a car; buys petrol, toilet paper, baby food, or bacon; catches a bus, train or aeroplane; uses a mobile phone; has an X-ray or ultrasound; listens to recorded music; or consumes any product that has been transported by a shipping line, along with any employee, manager or shareholder of such business has already been affected by the enforcement of the competition laws. More broadly, the way that European competition law is enforced has a direct effect on the certainty and predictability of the business environment in terms of the incentives, or disincentives, it creates for business to invest, combine their activities through merger or to enter into cooperative technological and research and development projects.

Economics is widely considered to be increasingly influential in the enforcement of European competition law. In the words of the current Chief Competition Economist of the European competition authority: ‘the fact that economics has become more important in EU antitrust policy and practice ... is hardly controversial’. The creation of the role of Chief Competition Economist at the competition authority is itself a relatively new development, the purpose of which was to provide an economic viewpoint to decision-makers, as well as on-going guidance to Commission investigative staff in the

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1 For consumers, these effects can relate to the price, availability, range and quality of products in a market. For management, enforcement activity can impact on a firm’s activities and profitability and, correspondingly, influence decisions as to investment, workforce size and scale of production. The investment returns and decisions of shareholders can also be influenced by such effects.


enforcement process.\textsuperscript{4} In addition, a substantial economic consulting sector has developed in Europe selling law firms and businesses economic expertise in relation to competition law matters. It is estimated that turnover of these firms increased by 25–30 per cent per annum in the decade from 1994 to 2004, increasing their revenues from £2.4 million to £24 million over that period.\textsuperscript{5}

However, despite the widely held perception that economics is influential in the enforcement of the competition laws, two areas remain largely unexplored. First, the extent to which economics has \textit{in fact} been influential in the enforcement of these laws at the case level. Second, \textit{in what way} precisely economics is used in the enforcement process. The failure to examine in any detail the use of economics in the enforcement of European competition law is surprising as such use has always been controversial.\textsuperscript{6} The European Courts have been particularly critical of the application of economics in a number of high profile decisions.\textsuperscript{7} A recent President of the European Court of First Instance has noted that: ‘[W]hile industrial economics is highly developed as an academic discipline, application of economic theories and models in concrete cases remains an area fraught with difficulty and uncertainty’.\textsuperscript{8}


\textsuperscript{5} Neven (n 3) 5.

\textsuperscript{6} The first judgment of the European Court of Justice in relation to oligopolies was critical of the Commission’s use of economic evidence: Joined cases C-68/94 and C-30/95 \textit{French Republic and Société commerciale des potasses et de l’azote (SCPA) and Entreprise minière et chimique (EMC) v Commission of the European Communities} [1998] ECR I-01375 paras [225]–[228]; equally the Court of First Instance was unconvinced by the Commission’s economic assessment in an earlier case: Joined cases T-68/89, T-77/89 and T-78/89 \textit{Società Italiana Vetro SpA, Fabbrica Pisana SpA and PPG Vernante Pennitalia SpA v Commission of the European Communities} [1992] ECR II-01403 para [336].


\textsuperscript{8} B. Vesterdorf ‘Standard of proof in merger cases: reflections in the light of recent case law of the Community Courts’ (paper presented at the BIICL third annual merger control conference, 6 December 2004) 14.
While there is an extensive literature on the substantive content and development of European competition law, and on the economic theory that relates to competition policy, a more limited number of studies have considered how economic expertise features in competition law enforcement. These studies have typically fallen into two categories. One category of studies has adopted a normative approach, examining how economics should be used in competition law enforcement. Two particular studies stand out in this category which, although presenting a thorough review of Commission enforcement practice in relation to the Merger Regulation and Article 81 of the EC Treaty, do so through a normative lens. A second category of studies focus on applications of economics in specific decisions of the Commission and the Courts. These studies typically present binary assessments as to whether ‘the economics’ has been applied ‘correctly’ or ‘incorrectly’, or

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9 Another set of studies have focused on enforcement practices, although not specifically on the use of economics in the enforcement process. These studies have attempted to ‘model’ and quantify enforcement decisions according to economic principles and techniques: M.A. Bergman, M. Jakobsson and C. Razo ‘An econometric analysis of the European Commission’s merger decisions’ (Working Paper 6, Department of Economics, Uppsala University, 2003); J. Briones ‘Oligopolistic dominance: is there a common approach in different jurisdictions? A review of decisions adopted by the Commission under the Merger Regulation’ (1995) 16 European Competition Law Review 337; T. Nilssen ‘On the consistency of merger policy’ (1997) 45 Journal of Industrial Economics 89.


whether ‘legal’ or ‘economic’ considerations were more relevant in the specific case.13

There are three limitations of this existing work in explaining enforcement practice. First, the studies have typically adopted too narrow a conception of economics, assuming economic theory to be the sum of economic knowledge. Second, existing studies have focused on Commission and Court decisions, and have not examined in any detail how economics features in the wider enforcement process. Finally, existing studies have failed to account for the fact that economics is employed in the enforcement of competition law by a range of actors and institutions, all of whom have different perspectives and interests in using economic knowledge.

Studies on the use of expert knowledge in legal or regulatory settings tell us that the last of these points may be particularly relevant. These studies suggest that formal knowledge is selectively transformed in its application in practical settings on the basis of the purposive interests and perspectives of those who use it. Thus, for example, the use of expert knowledge by judges has been found to be influenced by multiple constituencies and concerns, such as the need to maintain the social standing of the institution assessing, and the anticipated social and political implications of their decision.14 Lawyers, in using scientific knowledge, have been found to balance a trade-off between maintaining a perception of the institutional authority of scientific knowledge and using it as a tool in an adversarial process.15 The interests of experts have been found to affect the narration given to knowledge in their area of exper-

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tise in legal and regulatory settings, along with their evidential interpretation of such knowledge.\textsuperscript{16} Finally, the use of expert knowledge by regulatory agencies has been shown to be modulated by a complex dynamic of political and professional interests, which can change over time in ways that affect the way in which the knowledge is used.\textsuperscript{17} These studies, which find theoretical support in the larger literature relating to sociology of knowledge, suggest that the use of expert knowledge in practical and enforcement settings will invariably be influenced by the specific perspectives and interests of those who engage with the knowledge\textsuperscript{18} – including the way in which these actors balance a broader range of interests, expectations and obligations, some of which may be in tension – and of the institutional settings in which the knowledge is applied.\textsuperscript{19} In a nutshell, this literature implies that the use of expert knowledge in a legal or regulatory context can be expected to be ‘always situated, always purposive’.\textsuperscript{20}

Against this background, this book has three specific aims. First, it seeks to understand the nature of the expertise that economics provides in a specific, but highly relevant, area of competition law enforcement (relating to oligopolistic markets). It does so by adopting a broad conception of economics, comprising economic theory, economic reasoning and approach, economic techniques and tools, and economic data. Second, it seeks to examine the influence of each of these strands in the entire enforcement process, from case selection to the design of remedies. This approach captures cases which are subject to the formal and full legal process, as well as ‘non-cases’ that have not yet arisen, are not selected for further investigation, or are abandoned during an investigation. Finally, it seeks to critically examine the conclusions about


\textsuperscript{18} The notion of perspectives and interests in this context does not capture merely a tendency to use the knowledge instrumentally but also the more deep-rooted and subconscious perspectives and interests of the actors which is a function of a variety of things including their different forms of reasoning, different standards of proof, and different audiences.


\textsuperscript{20} Edmond (n 19) 2.
the use of economics in the enforcement of the relevant competition laws, having regard to the potential application of economic knowledge by actors and institutions with different perspectives and interests in the use of the knowledge.

There are a number of specific reasons why an investigation into the use of economics in competition law enforcement is important and timely. First, the legal provisions relating to mergers changed in 2004 to be more economic in focus and to broaden the enforcement powers of the Commission.\textsuperscript{21} In addition, there are current proposals that economic evidence and reasoning feature more prominently in identifying and capturing past instances of anti-competitive behaviour.\textsuperscript{22} Second, the European Commission is strongly encouraging the use of private litigation in relation to competition law, which, if it follows the experience of elsewhere, particularly the United States, will lead to economics becoming more prominent in legal proceedings.\textsuperscript{23} Third, the number, and value, of merger investigations involving complex economics is very large and growing. For example, in addition to considering the unilateral effects of a merger, the Commission, in discharging its responsibilities, routinely has to take into account potential coordinated effects, non-coordinated effects, conglomerate effects, and more recently, so-called ‘diagonal’ effects. Fourth, the European Courts have increasingly taken a detailed interest in how the Commission uses economics in making assessments in competition matters. In at least four major decisions, the Court has been critical of the use of the Commission’s use of economics and its approach to the economic evidence employed in the decision.\textsuperscript{24}

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\textsuperscript{22} Commission of the European Communities \textit{‘Guidance on the Commission’s enforcement priorities in applying Article 82 EC Treaty to abusive exclusionary conduct by dominant undertakings’} (COM) \citeyear{2008} 3 December 2008; Economic Advisory Group on Competition Policy Report \textit{‘An economic approach to Article 82’} (paper prepared for the Chief Economist of the European Commission, July 2005) 2.

\textsuperscript{23} In the United States, for example, economists represent 11 per cent of all expert witnesses to appear before the Federal Court: Federal Judicial Center \textit{‘Expert testimony in Federal civil trials: a preliminary analysis’} Report by the Federal Judicial Center (2000).

\textsuperscript{24} In \textit{Impala v. Commission}, the CFI criticised the Commission’s assessment of the effects of the merger on competition in the relevant market as ‘succinct’ ‘superficial’, ‘purely formal’. In \textit{Airtours v Commission} the court found the Commission’s decision to be ‘vitiated by a series of errors of assessment as to factors fundamental to
More generally it is evident that economics is on the ascendancy in European competition policy. Since the mid-1980s economics has featured increasingly in policy discourse and in the official documents, notices and guidelines of European Union institutions and Member States. This trend seems set to continue as politicians and policymakers across Europe call for the use of ‘more economics’ in competition policy, including the greater reception of economic concepts, theories and instruments in competition law enforcement.25

This book seeks to take a step back from this general policy push for ‘more economics’ and focus instead on the enforcement context in which economics is to have an increased role. In critically examining how economics is employed in the enforcement of European competition law this book does not seek to suggest that economics have no role in enforcement, or that it should be replaced with alternative approaches. The objective of the book is quite the opposite. Its purpose is to place economics on a more secure foundation in European policy discussions by highlighting the practical tensions that affect its use in practice, and then by suggesting ways in which these tensions might be addressed. In doing so, the book seeks to provide much-needed empirical content to a number of specific questions regarding economics and enforcement such as: what precisely do we know about how economics contributes to the day-to-day enforcement activity of the European competition institutions? How are various contextual or institutional factors likely to impact on the ability for economics to have a more prominent role in the future enforcement of competition law in Europe? What is the role of sophisticated economic modelling vis-à-vis other economic evidence in the enforcement process? What standard do the courts apply when reviewing economic evidence?

any assessment of whether a collective dominant position might be created’. In Schneider Electric SA v Commission the Court held that the Commission’s errors of analysis and assessment were such as ‘to deprive of probative value the economic assessment of the impact of the concentration’: Case T-464/04 Independent Music Publishers and Labels Association (Impala, International Association) v Commission of the European Communities [2006] ECR II-02289; Case T-342/99 Airtours plc v Commission of the European Communities [2002] ECR II-02585; Case T-77/02 Schneider Electric SA v Commission of the European Communities [2002] ECR II-04071; Case T-80/02 Tetra Laval BV v Commission of the European Communities [2002] ECR II-04381.

To fulfil its aims, this book adopts a case-study approach. Specifically, it examines the application of economics through a detailed empirical review of one area of enforcement activity, namely the competition laws relating to the potential for tacit coordination in oligopolistic markets. The role of economics in the enforcement of these laws – known as the ‘collective dominance’ laws, or more recently, ‘the laws relating to coordinated effects’ – has been selected for a number of reasons.

First, at a practical level, tight oligopolistic markets are one of the most common forms of industrial structure in Europe and exist in diverse areas, from petrol retailing to supermarkets to mobile phone service providers. Accordingly, advocates for ‘more economics’ in competition law will frequently be faced with the need to enforce provisions in relation to this form of market structure. As one economist has put it: ‘oligopolies are the business of enforcement agencies, day in and day out’. In this respect it is important to note that the Commission is required under the European Merger Regulation guidelines to consider and assess the potential for collective dominance in every merger in tight oligopolistic markets.26

Second, although one of the most common forms of market structure in Europe, oligopolistic markets provide one of the most analytically challenging areas in which economics has to be applied. This is not because economists have ignored this area; quite the contrary. The economic examination of oligopolistic markets, and the potential for tacit collusion, is a well-established research area and one in which hundreds of new academic articles are published each year. In principle, then, economics has the potential to offer much in the enforcement of competition law in this area. Furthermore, the conclusions of a large body of this literature suggest that the incentives for firms to tacitly collude in tight oligopolistic markets can be substantial, and therefore the theoretical potential for the occurrence of this behavior is high.27 Some economic studies have indicated that in ‘oligopolistic markets a tendency toward the spontaneous co-ordination of business policies seems inevitable’.28

Third, the enforcement of the laws relating to coordinated effects has proven among the most controversial in European competition law, and one

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where the use of economics has been heavily criticised. Three of the most controversial merger decisions in recent years have involved issues of collective dominance and almost all of the decisions of the Commission in non-merger matters involving collective dominance have been appealed to the European Courts. The scope for these appeals has also arguably broadened in recent years as the Commission is now required to thoroughly justify the economic basis for its decision not only to prohibit, but also to allow, a merger on the basis of an examination of coordinated effects. 29

Finally, the scope for the application of the concept of collective dominance is growing. In particular, the concept of coordinated effects has recently been included in guidelines for the Commission’s assessment of non-horizontal mergers, 30 and has been incorporated into sector-specific European Directives. 31 In addition, National Competition Agencies in Member States such as Denmark, France, Italy and the United Kingdom have actively employed the concept of collective dominance (as developed in the European jurisdiction) under national competition laws. 32

For all these reasons, the area chosen for the case study was considered to be analytically rich and of practical policy relevance. The area of collective dominance was also chosen as it is an enforcement activity amenable to exhaustive case review. 33

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33 In practical terms, cases dealing with collective dominance are readily identifiable, and the assessment of collective dominance invariably forms a discrete section of decisions.
However, it is argued that the conclusions of the case study are potentially generalisable to a broader area of enforcement activity. This is because collective dominance investigations are not a peculiar area of competition enforcement; the process used in collective dominance merger investigations is the same as in unilateral effects merger investigations, and the process used in collective dominance abuse cases is the same as in single dominance abuse cases. Complex economic assessments are frequently required in each of these investigations.

As an introduction to the case study, Chapter 2 of this book introduces the relevant enforcement context. It discusses how European law has responded to the potential economic ‘mischief’ that can arise in oligopolistic market structures, outlining the relevant legal provisions under the European Community Merger Regulation (EMCR) and Article 82 of the EC Treaty and the principal actors and institutions involved in enforcement matters. It also outlines the methodology adopted in the case study for examining how economics has featured in this specific enforcement setting.

Chapter 3 outlines the substantive law and economics underlying the empirical study. It describes the economic notion of tacit collusion and its key theories, concepts and methodological approaches, and details the predictions of economics as to the circumstances in which tacit collusion is more or less likely to occur (a fuller description of the theory of tacit collusion is presented in Appendix 1). The principal question explored in this chapter is: what is the relationship, if any, between the legal mechanisms for addressing the potential for tacit coordination in European law, and the predictions of the mass of models that comprise the economic theory of tacit collusion? The description in this chapter sets up a number of questions that are addressed in later chapters: what is the effect of the uncertainty associated with the multiplicity of economic models on their potential use? Are there inherent limitations in the application of economic models in factual settings? In combination, what potential do economic models of tacit collusion have as an applied tool in making legal determinations under Article 82 and the ECMR?

Chapters 4 and 5 detail the results of the empirical review. These chapters do not seek to assess or critique how economic expertise should be used in the enforcement of the collective dominance laws, or to comment on the merits or appropriateness of the reasoning or decisions of the Commission and Courts in specific cases. Rather, the purpose of these chapters is to describe, based on the published reasoning of the decision-makers and the experience of those involved in the wider enforcement process, how, in fact, economics influences the enforcement of the collective dominance laws. Accordingly, Chapter 4 presents the results of the review of how economics has featured in the enforcement of the relevant laws as indicated by the text of the reported decisions of the Commission and the Courts. Chapter 5 looks beyond these
reported decisions to understand the influence of economics in the process surrounding, and leading up to, these final determinations, as revealed by those involved in these processes. Both chapters examine the use of economics through the multifaceted conception of economics described previously. These chapters explore a number of questions about past enforcement actions: What role did economic theory play in these actions? How did the economic theory applied relate to the underlying academic models? Was economic data systematically collected and analysed as part of the enforcement process? What kinds of economic techniques were employed in investigations? How influential was economic evidence relative to other evidence collected in an investigation? Did the use of economic expertise differ as between *ex post* assessments and *ex ante* assessments of collective dominance? Were expert economists systematically involved in enforcement actions? What were the relative roles, and interactions, of lawyers and economists in the enforcement process?

In brief, the evidence shows that while the overall predictions of particular theoretical models are frequently used to provide the basis for arguments in enforcement activity, the application of such models to the factual settings of individual cases is not typically, or systematically, associated with the collection or analyses of relevant data or evidence. In addition, there is variability in the use of different facets of economic expertise: descriptive techniques are employed far more frequently than quantitative techniques; factors derived from economic theory are employed variably across decisions; and aspects of economic reasoning and data are emphasised over others. A further insight to emerge is that the different perspectives and interests of those who use economics, and the specific characteristics of the enforcement setting, substantively impact on how economics has been applied.

Drawing on the findings of the case study, Chapter 6 outlines and examines the three principal functions identified for economics in collective dominance investigations. It concludes that the primary influence of economics in the enforcement process is located at a general level: it provides a broad theoretical framework, a conceptual approach and a descriptive expository technique. It is argued that this contribution is valuable, and, indeed, necessary to the enforcement of the laws, however areas of tension are also identified, especially in relation to the degree of flexibility of economic reasoning in the area under examination, and the changing nature of economic exposition – with its increased emphasis on hypothetical deduction from pure theory and decreased emphasis on supporting facts.

Chapter 7 examines the implications of the key conclusions of the book for the use of economics in European competition law enforcement and for the ‘more economics’ approach currently advocated in competition policy. At a general level, it is argued that it is likely to be inefficacious to advocate for
‘more economics’ at the policy level, without appreciating and considering a range of issues relating to the nature of economics and the enforcement context in which the economics will be applied. In this respect it is argued that a realistic and empirically grounded notion of ‘economics’ needs to be adopted in policy discourse which takes account of those parts of economic knowledge and expertise that are most capable of being usefully applied in enforcement settings. It is also argued that economics, as transformed by its application in specific enforcement settings, can exhibit a flexibility that can be inimical to the purposes of the enforcement process, and the law more generally, unless it is applied in a context in which there are appropriate institutional checks and balances. In this respect, there is scope for the consideration of institutional and procedural reforms. However, it is proposed that one of the most effective constraints on such flexibility is an enforcement process that provides a central role for the collection and considered weighing of economic facts and data.