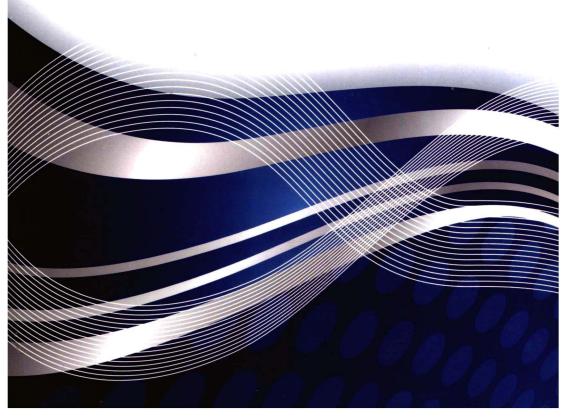
**EDITED BY** 

Joseph E. Harrington Jr Yannis Katsoulacos



# Recent Advances in the Analysis of Competition Policy and Regulation



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**Edward Elgar** 

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#### Joseph E. Harrington Jr and Yannis Katsoulacos

The Competition and Regulation European Summer School and Conference (CRESSE) is an informal network of academics and professionals with an interest in competition policy and sectoral regulation. It was initiated by Yannis Katsoulacos (Athens University of Economics and Business) in 2005. The annual conference organized by CRESSE has since grown to become an important event in the competition and regulation conferences calendar with the support of Joe Harrington (Johns Hopkins University), Massimo Motta (Barcelona Graduate School), Patrick Rey (University of Toulouse), Pierre Régibeau (University of Essex), and David Ulph (University of St Andrews). The objective is to provide a forum in which the latest research in the areas of competition and regulation is presented and discussed. Presentations in the three-day annual conference include 3-5 invited papers and a limited number of papers selected from those submitted following a call in the major IO journals and the conference website (http://www.cresse.info). The annual CRESSE Conference is organized in early July in Greece, the institution responsible for the organization being the Athens University of Economics and Business.

CRESSE also organizes an annual Summer School in which visiting faculty from a large number of European and US universities provide high quality training to practitioners of competition policy and sectoral regulation that wish to be acquainted with the most recent economic and legal developments. It is also active in disseminating research in the areas of competition policy and regulation and in contributing to the field through the organization of special policy sessions and roundtables that deliver public debates on topical policy issues.

The Sixth CRESSE Annual Conference took place in Rhodes on 1-3 July 2011, on 'Advances in the Analysis of Competition Policy and Regulation'. There were two Keynote Lectures:

• The Jean-Jacques Laffont Lecture was presented by Professor Mike Whinston (Northwestern University) on the topic of 'Horizontal merger policy: new work on an old problem'.

• The CRESSE Conference Policy Lecture was presented by Professor Jacques Crémer (Toulouse School of Economics) on the topic of 'Switching costs and network effects in competition policy'.

There were also two special policy sessions: one on 'Financial regulation' and one on 'Online search and advertising'.

This volume contains papers that were presented at the 2011 CRESSE Conference and which were selected from a large number of papers submitted for inclusion in the volume. We have categorized the selected papers into four parts. In Part I there are chapters on competition policy/ antitrust and some related issues, while in Part II there are chapters on 'Online search, advertising and two-sided markets'. In Part III there are chapters on regulation and finally, Part IV contains the papers presented in the special policy session on Financial Regulation. The vast majority of chapters present original research rather than being review papers, and contain important new theoretical and/or empirical results.

#### PART I: COMPETITION POLICY AND RELATED **ISSUES**

With the exception of the chapter by Johannes Koenen and Martin Peitz on 'The economics of pending patents' all chapters in Part I contain analyses of various aspects of competition policy. In particular, the chapters contained in Part I address issues concerning the implications of switching costs and network effects in competition policy, the effects of leniency programmes, the identification of maverick firms, the implications of competition policy on the share value of infringed firms, optimal bundling and the analysis of a case of social welfare-enhancing collusion.

The chapter on 'Switching costs and network effects in competition policy' by Jacques Crémer and Gary Biglaiser builds on a series of papers - Biglaiser et al. (2011) and Biglaiser and Cremer (2011a, 2011b) - with the aim of discussing the similarities and differences between the strategic consequences of switching costs and network effects. The chapter reviews a number of recent results on the economics of competition with network effects and switching costs and highlights several which have important consequences for antitrust and regulatory policy. Crémer and Biglaiser show that the distribution of switching costs and network effects in the population is important for the dynamics of markets. Second, despite the impressive amount of work on these effects in the literature (see Farrell and Klemperer, 2007), there is still much which is not understood at the most fundamental theoretical level about the dynamics of these industries.

Third, although it is true that switching costs and network effects have some similarities, there are also many differences. In particular, our understanding of the value of incumbency is on much more solid ground for switching costs than for network effects. Finally, it is noted that studying switching costs and network effects in isolation could be misleading. Given the importance of markets where they co-exist, much more effort should be spent on understanding their interaction.

In the chapter 'Corporate leniency with private information: an exploratory example', Joseph E. Harrington Jr examines corporate leniency programmes that provide relief from government penalties to the first member of a cartel to come forward and cooperate with the authorities. The chapter explores the incentives to apply for leniency when each cartel member has private information as to the likelihood that the competition authority will be able to convict them without a cooperating firm. A firm may apply for leniency because it fears being convicted or because it fears another firm will apply. An example is provided which suggests that leniency programmes are significantly more effective when firms have private information.

In the chapter on 'The economics of pending patents', Johannes Koenen and Martin Peitz provide a treatment of a number of questions pertaining to pending patents — a subject that has so far mainly been discussed en passant in the existing literature. They present the underlying institutional and legal framework that governs pending patents and some basic facts related to them. Koenen and Peitz focus on the strategic considerations of firms in the earliest stage of the patenting process and the interplay with the patent office. This is followed by a consideration of the perspective of the patent and trademark offices (PTOs) and, in particular, acknowledging the limited resources that are available to PTOs. Finally, Koenen and Peitz investigate the potential abuse of pending patents and the role of reputation of patenting firms.

In 'Testing for the presence of a maverick in the French audit industry', Marc Ivaldi, Sébastien Mitraille and Catherine Muller propose an original test for identifying a maverick firm which is part of the assessment of the risks of collective dominance according to the so-called Airtours criteria used by the European competition authorities. First, they study the French legal and institutional background – whose main feature is to require large- and medium-size firms to be annually audited by a pair of auditors – and in particular they investigate the applicability of the three cumulative Airtours criteria. Second, they implement a test of the presence of a maverick by fitting a supply equation to an original dataset that was collected over the period 2004 to 2006 that contains all the fees paid to audit committees by the 120 companies with the largest market

capitalizations of the French marketplace (the SBF120). Their results indicate that there is no evidence of a maverick in this market and that the Airtours criteria might be met.

The chapter on 'Optimal decisions in two-stage bundling' by Xeni Dassiou and Dionysius Glycopantis develops a generalized framework for pure bundling where buyer tastes for two goods are assumed to follow a normal distribution. In the previous literature, optimal bundling decisions have been considered under the assumption that the weights of the two goods are fixed and equal, which has the implication that the only consideration is to choose the profit maximizing optimal price. The approach adopted by Dassiou and Glycopantis is different and more realistic. The monopolist first decides on the optimal weights of the two goods and in the second stage derives the profit maximizing bundle price. The authors derive welfare and policy implications and provide comparisons to results obtained by the fixed weights approach.

In 'Competition policy and firm's damages', Panagiotis N. Fotis evaluates the impact of major antitrust and abuse of dominant position investigations on a firm's share value. For this purpose, he divides the period of each competition case into two sub-periods: the 'Investigation period', which begins from the outset of the investigation and ends when the competition authority issues its final decision to the infringed firms, and the 'Deterrence period', which follows the 'Investigation period' and ends with the final judgment of the Court of Appeal. He uses the aggregate regression-based approach to estimate the average and cumulative average residuals of the firms that infringe Articles 1 and 2 of Greek Competition Law. The empirical results support the hypothesis that the release of the final decisions of the Hellenic Competition Commission and the Court of Appeal negatively affect the share value of the infringed firms.

In 'Social-welfare-enhancing collusion and trade', George Deltas, Alberto Salvo and Helder Vasconcelos extend Deltas et al. (2011) that examines the welfare implications of collusion (or merger to monopoly) in a model of geographically separated markets with differentiated goods. Their original paper showed how restricting trade relative to duopolistic competition can be beneficial for society and consumers. In this chapter, they show that a social planner would further restrict trade than the perfect cartel would, and also how the socially optimal market allocation can be induced through a system of taxes and subsidies, or through 'antidumping' regulation. They generalize the model to allow for home-biased consumer tastes and show that their original analysis is robust. They also consider whether autarky can improve social welfare over market-based trade regimes, in the spirit of Brander and Krugman (1983).

## PART II: ONLINE SEARCH, ADVERTISING AND TWO-SIDED MARKETS

Part II starts with 'A note on vertical search engines' foreclosure' by Emanuele Tarantino which offers a brief review of online searches and their relation to competition policy issues. The chapter discusses the functioning of the Internet search intermediation market and then examines general search engines' incentives to bias search results so as to favour integrated websites. Two forms of manipulating practices are considered – organic search manipulation and sponsored search manipulation – and the main trade-offs are discussed.

'Issues in online advertising and competition policy: a two-sided market perspective' by Emilio Calvano and Bruno Jullien shifts the focus to issues related to online advertising. They emphasize the relevance of theories of competition between two-sided platforms noting that, although theories of platform competition are not specific to the Internet, they shed light on most of the basic trade-offs faced by Internet platforms. These theories contrast market outcomes with welfare-maximizing outcomes under various market configurations and governance structures. In the chapter, the authors first discuss competition policy issues specific to two-sided intermediation that are relevant for advertising markets in general, and then turn to those aspects inherent to the online world that they consider can potentially lead to new intuitions or deserve specific treatment.

The chapter 'Assessing unilateral merger effects in the Dutch daily newspaper market' by Lapo Filistrucchi, Tobias J. Klein and Thomas O. Michielsen compares different methods for assessing unilateral merger effects in a two-sided market by applying them to a hypothetical merger in the Dutch newspaper industry. For this purpose, the authors first specify and estimate a structural model of demand for differentiated products on both the readership and the advertising side of the market. This allows them to recover price elasticities and indirect network effects. Following Filistrucchi et al. (2010), marginal costs are then recovered from an oligopoly model of the supply side. They use these estimates of price elasticities, network effects and marginal costs to compare different methods that can be used to evaluate merger effects. Specifically, they perform a concentration analysis based on the Herfindahl Hirschmann Index, a small but significant non-transitory increase in price test, measure upward pricing pressure and conduct a full merger simulation.

'Leadership in multi-sided markets and dominance in online advertising' by Federico Etro analyses the role of leadership in multi-sided markets. Etro argues that search and display advertising are better characterized by quantity and price competition, respectively, with leadership

by a dominant firm and few followers. A platform that reached dominance in search advertising may have an incentive to limit services to consumers that are aggressive with the advertisers, or may be more likely to exploit its scale in search advertising to build barriers to entry and to adopt click-weighted auctions to manipulate the pricing of sponsored links. A dominant platform in display advertising may increase the rewards of content providers to increase prices on advertisers, or may adopt exclusive clauses to predate on other platforms. The author discusses how this creates the potential for various antitrust abuses.

#### PART III: REGULATION

'Bargaining and collusion in a regulatory model' by Raffaele Fiocco and Mario Gilli considers a standard three-tier regulatory model, in which a benevolent principal delegates to a regulatory agency two tasks: the supervision of the firm's (two-type) costs and the arrangement of a pricing mechanism. The agency may have an incentive to manipulate information to the principal to share the gains of collusion with the firm. The novelty of this chapter is that both the regulatory mechanism and the side contracting between the agency and the firm are modelled as a bargaining process. While as usual the inefficient firm does not have any interest in cost manipulation, the authors find that the efficient firm has an incentive to collude only if the agency's bargaining power is high enough, and the total gains of collusion are now lower than what the two partners would appropriate if the agency could make a take it or leave it offer. They then focus on the optimal institutional responses to the possibility of collusion. In a setting where the incompleteness of contracts prevents the principal from designing a screening mechanism and thus Tirole's equivalence principle does not apply, they show how the players' bargaining powers crucially drive the optimal response to collusion.

The chapter 'Investment and the strategic role of capital structure in regulated industries: theory and evidence' by Carlo Cambini, Laura Rondi and Yossi Spiegel provides a summary and synthesis of results from an ongoing research project on the effect of privatization and the establishment of Independent Regulatory Authorities (IRAs) on the capital structure and investments of regulated firms and on regulated prices. The theoretical model yields the following predictions: (1) regulated firms should become more leveraged and should invest more when they are subject to regulation by IRAs; (2) regulated firms should become more leveraged and should invest more when they are more privatized (the state holds a smaller stake in the firm); and (3) higher financial leverage should

lead to higher regulated prices. Based on evidence from the 15 European Union (EU) countries, the authors provide strong support for hypotheses (1) and (3), but much weaker support for hypothesis (2). Their results indicate that the increase in the leverage of many EU regulated firms since the early 1990s, often referred to as the 'dash for debt' phenomenon, is a natural response of regulated firms to the privatization process and the establishment of independent regulatory agencies. The results also indicate that while the 'dash for debt' is associated with higher regulated prices, it is also associated with higher investments and hence may be welfare enhancing.

In 'Rethinking regulatory capture', Per J. Agrell and Axel Gautier note that conventional capture models rely on the idea that the regulator is induced to be lenient with respect to the regulated firm through offers of monetary transfers (the bribery model) or future employment (the revolving doors model). To avoid socially costly capture, the political principal should then either implement collusion-proof mechanisms through the delegation of welfare gains, or severely restrict the career paths of regulatory staff. The paradox of capture is that neither of the two modes of capture, nor the remedy are commonly found in practice. This chapter proposes a rethink of capture based on the widespread use of industry commissioned consultants, experts and lobbyists that produce information for regulatory and policy use. A model (Agrell and Gautier, 2010) introduces a 'soft capture' concept based on self-enforced collusion between the firm and regulator, linked to the role of the regulator as information-processing intermediary for the political principal. The firm puts processed but biased information at the free disposal of the regulator who can then either use the submitted information or produce more accurate information at a cost. Under a set of mild conditions, the equilibrium involves soft capture and the regulator uses the submitted information, leading to some distortions in welfare. A case study of the US Occupational Safety and Health Administration (OSHA) serves to motivate and illustrate the model.

In 'Can structural models be useful to understand the electricity wholesale markets? An application to Spain', Vítor Marques, Adelino Fortunato and Isabel Soares aim to analyse the behaviour of agents in highly concentrated and strongly regulated electricity wholesale markets with rigid demand. A structural estimation is performed on the former Spanish electricity generation market during January 1999 to June 2007. Despite the characteristics of this market, the chapter suggests that the average high markups observed in the period were very likely due to the implementation of anti-competitive strategies. Therefore, the authors conclude that the opening of a wholesale electricity market without the prior

increase in the number of market players does not prevent, by itself, the manipulation of the market, even when the market is strongly regulated.

#### PART IV: FINANCIAL REGULATION

Part IV contains the three papers presented in the conference special policy session on financial regulation.

In 'Rebuilding international financial regulation and Basel III', Kern Alexander considers the effectiveness of the Basel Capital Accord in influencing states to regulate their banks and how international financial regulation should be rebuilt post the financial crisis. Basel II embodied some of the major weaknesses with the current international financial standard-setting approach because the standards failed to protect the broader financial system against systemic risk. Effective international regulatory reform will require a more macro-prudential approach to regulation, supervision and crisis management that will necessarily require enhanced measures to control excessive risk-taking.

In 'The shock of the old: the first financial crisis of the twenty-first century', Geoffrey Wood notes that at the end of the twentieth century the world seemed to be booming, and this boom seemed set to continue for many years. Yet, in less than a decade, the world had been ravaged by banking crises. This was particularly striking in Britain, where the previous banking crisis had been in 1866. This chapter considers what had changed between 1866 and the twenty-first century to allow an individual bank failure to turn into a crisis, and how to undo the effects of these changes. So far as Britain goes, Wood suggests, the answers are straightforward. All that is needed to restore stability, through allowing the nineteenth-century approach of providing general liquidity and not bailing out individual institutions, is to improve deposit protection and have a special insolvency regime for banks. But there are also international problems. A market system cannot function unless it is possible for firms to fail, but this failure must be orderly. Hence, only when there is a system to allow orderly closure of banks, including large ones, international ones and investment banks, is there minimal danger of chaotic bailouts again in the future.

In 'Fixing finance: are we there yet?', Thomas F. Huertas, after briefly reviewing the huge cost caused by the post-2008 financial crisis, argues that policymakers have put in place a comprehensive programme (better regulation, better deposit guarantee schemes, better supervision and better resolution) that should not only make banks less likely to fail, but also safe to fail. If implemented, this programme will limit the risk that the financial

sector will cause crises in the future. However, reform to the financial system must also be accompanied by steps to prevent other shocks (such as might be posed by Eurozone sovereign debt), if crises are to become a thing of the past.

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