

# Annual report for the Centre for Competition Policy 1 January – 31 December 2015

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This report is an abridged version of the Annual Report 2015 submitted to the University of East Anglia in February 2016

*The objective of CCP, as stated in its constitution, is to undertake high quality independent academic research into competition and regulation policy and its impact on companies and others. Its output is in the public domain and contributes both to the development of policy and to understanding business responses.*

## **1 Introduction**

The Centre for Competition Policy (CCP) is a joint venture between the School of Economics (ECO), the School of Law (LAW), Norwich Business School (NBS) and the School of Politics, Philosophy, Language and Communication Studies (PPL). CCP has established itself as a leading internationally recognised research centre focused on competition policy and regulation.<sup>1</sup> Thorough enquiry in this field is necessarily multidisciplinary. In its research, CCP draws on models, theories and techniques from economics, law and political science. Economic analysis provides an understanding of how consumers, firms and markets operate, of when markets fail for lack of competition, of techniques which might be adopted to regulate behaviour and of the consequences of such policy interventions. Legal analysis is necessary to ensure the legislature and the courts establish and develop sound rules with which firms should comply, and which regulatory agencies can enforce and operate within. Political science provides an understanding of the design and development of policies, and into the bodies and institutions that implement them. Our research applies each of these disciplines individually and together to achieve real-world policy relevance without compromising academic rigour.

Details of CCP's current research themes can be found in section 2 below.

All CCP faculty and research students are members of one of UEA's Schools. In 2015 four new faculty members joined, increasing the total number of faculty members to 33 by the end of 2015. We continue to welcome new PhD students to CCP and to provide support to research students through our induction programme and other specially designed events. Two students joined us in 2015 and 4 of our PhD Students submitted their theses. At the end of 2015 we have 20 PhD students who are members of CCP. CCP membership in 2015 also included three Research Associates and 15 associate members. The Centre employed 14 additional researchers on shorter contracts to work on CCP-related projects. Centre members have been supported by two administrators, who were joined by Rupert Sheldon on a temporary contract for two months from June 2015.

### **Summary of activities in 2015**

CCP members regularly engage with the academic community through publications, presentations and organised academic events. In 2015 we published twenty articles in peer-refereed journals, four book chapters and four book reviews, as well as thirteen CCP working papers and associated policy briefs. Members published a further sixteen working papers in other series. We organised three events designed for academics, including our Annual Summer Conference on "Competition in the Digital Age" and a capacity building event focusing on economics of creative markets co-hosted with CREATE. We held forty-one Friday research seminars at UEA, with sixteen visiting speakers and twenty-five CCP speakers. In addition, CCP members presented their work at eighty-six academic conferences, workshops.

CCP engages actively with practitioners through formal presentations, participation in practitioner events, organised discussions, responses to consultations and through social and traditional media. In

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<sup>1</sup> Competition policy provides a broad framework for the manner in which firms can interact, while regulation sets industry-specific rules. Markets with many alternative suppliers typically provide consumers with products and services they want at the best possible prices. In such markets, competition policy provides little restraint on business behaviour, the exception being on cartel practices, which are nearly always harmful. When fewer firms participate in a market, however, it is appropriate to constrain a range of anticompetitive business practices. Competition law provides the general framework for this. In cases where entry and competition cannot erode market power, at least in the medium term, policy options include direct (sectoral) regulation of the firms' behaviour.

2015 CCP members provided 31 presentations to practitioner audiences and participated in a further six practitioner events. We continued with our more direct engagement with practitioners through one-to-one or small group meetings, taking part in thirty such events, and through eleven responses to consultations. CCP now has in excess of 1650 followers on twitter and in 2015 recorded 14 cases of interactions with traditional media.

### **Impact of CCP research**

As detailed in section 2 below, the Centre has continued to deliver relevant output and policy advice across its programme of academic research during 2015. Through the University's Impact Support Fund we have secured a grant to extend our engagement activities and to monitor and record such instances with greater accuracy.

During the year CCP members engaged extensively in discussions arising from the Competition and Markets Authority market investigation of the energy sector. The discussions occurred across government departments, regulators and companies.

Stephan acted as an expert advisor to the defence team of Clive Dean in the UK's first criminal cartel trial to be contested before a jury. Stephan agreed to assist his defence team, drawing directly on his research and expertise. Mr Dean (along with a co-defendant, Nicholas Stringer) were tried under the old cartel offence which required the prosecution to establish beyond reasonable doubt that they had acted dishonestly according to the standards of reasonable and honest people. With Stephan's help, the CMA's case was challenged on dishonesty grounds, as there were legitimate bankruptcy and safety concerns that motivated the cartel arrangement. Both Mr Dean and Mr Stringer were acquitted by the jury. The outcome highlighted how dishonesty is a fluid, unpredictable standard that is ill suited to the criminal cartel offence, thereby supporting both Stephan's research conclusions and the Government's decision to reform the offence in 2013 by removing the dishonesty requirement.

Commissioned work by DG Competition on geographic market definition carried out by Fletcher and Lyons was well received by the European Commission, and Commissioner Vestager requested a one-hour personal meeting with the authors, held on 1st December, to discuss the implications.

Among the academic highlights were CCP's 11th Annual Conference which took place on the 18<sup>th</sup> and 19<sup>th</sup> June in the Julian Study Centre at the University of East Anglia. The conference explored the fascinating developments and unresolved competition issues that have arisen through the increased use of digital technology. With the topic of digital markets approached from several different disciplines, including computer science, economics, law and politics, issues such as consumer search, information collection, information processing, comparison websites, internet platforms, privacy, consent, trust and evidence were widely debated over the two days. The conference was attended by 96 delegates, 14 of whom were speakers. Out of these, 64 were academics, 13 were from the private sector and 19 were from government bodies. Presentations were given by 12 external speakers from a mixture of academic and practitioner backgrounds and 2 CCP faculty members. Social media was widely used to promote the conference both prior to, during, and after the event. The CCP twitter profile increased with over 15,500 views of our conference tweets alone. In addition many of our tweets were retweeted and some attendees were using our #ccp2015conf hashtag when talking about the conference. CCP PhD students were live blogging throughout the conference via the research@CCP wordpress site. As well as alerting our followers to the events of the conference as they unfolded, the review blogs have also stimulated ongoing discussion.

### **Knowledge Exchange**

In addition to teaching on relevant modules on undergraduate and postgraduate degrees, CCP members have delivered two bespoke training courses during the year, both of which were run for the first time the previous year. In October, Fletcher organised and delivered a two day course on "Economics of Competition Policy for Economists", together with Hviid and a number of practitioners, which attracted 29 participants from the public and private sector. In December, Hviid organised and delivered a two-day course on the "Introduction to the economics of competition policy", together with Fletcher, Lyons and Waddams, to 20 staff from the Government Economic Service (GES). The

latter was developed in 2014 for the Department for Business Innovation and Skills (BIS) and is now being offered to the GES through BIS. Informal discussion as well as the feedback form showed that both events were very well received by the participants.

### **Visitors and engagement with other research centres**

During 2015 CCP welcomed a number of visitors to the centre. Shorter visits included fellow academics Joel Waldfogel from the University of Minnesota, Andy Gavil from Howard University and Iwan Bos from the University of Maastricht.

A further three visits arose as a consequence of our engagement with other research centres.

CCP is an active member of the Competition Law and Economics European Network (CLEEN) of research centres. Several research students from CCP participated in and presented papers at the annual CLEEN conference, this year hosted by the Tilburg Law and Economics Center (TILEC) at University of Tilburg. This network also gave rise in 2015 to visits to CCP by Ignacio Herrera-Anchustegui and Ingrid Halvorsen Barlund, both PhD students at the University of Bergen and members of Bergen Center for Competition Law and Economics (BECCL), who visited the Centre for two weeks in October/November and presented their work to CCP members.

As a result of the involvement of several CCP members in the RCUK Centre for Copyright and New Business Models in the Creative Economy (CREATe), CCP co-organised a CREATe event at UEA in February 2015. This led to a visit by Liz Dowthwaite, a PhD student at the University of and member of CREATe, to the Centre for three months between October and December. Liz worked on how crowdfunding has affected the videogames industry. This visit, along with our interaction with CREATe more generally, has strengthened CCP's research stream on the digital industries.

### **Internal Organisation**

The day-to-day running of the centre is undertaken by the Director, supported by the Centre Manager and by two Deputy Directors.

A Steering Group offers ongoing support and vision for the Centre. In addition to the Director, Hviid, and deputy directors, Fletcher and Lyons, it has two further members, Hanretty and Stephan, chosen to ensure that there is a representative from each sponsoring school. From September to December, Street replaced Hanretty as the representative of PPL to cover for a period of leave.

The Centre's Management Committee oversees the performance of the Centre on behalf of the partner Schools and the University. It is chaired by the PVC for Research and, in addition to the CCP Director and one CCP Deputy Director, consists of heads of School from the four sponsoring Schools.

The Advisory Board was reconstituted this year to reflect the needs of the new post-ESRC-funding Centre. Consisting of distinguished members external to the University and representing the relevant user groups, it offers valuable advice and support to the Centre and acts as the Centre's ambassadors in high level policy circles.

### **Finances**

CCP funding comes from numerous sources. In 2015 we secured public funding from the ESRC for a Knowledge Transfer Partnership grant together with Cornwall Energy, as well as a small grant through CREATe. We also had two research contracts with the EU and one with the OECD. Some funds were raised through knowledge exchange, described above. Five public sector organisations subscribed to CCP's new membership scheme in 2015. These were the Department of Business, Innovation and Skills (BIS), the Competition and Markets Authority (CMA), the Office of Communications (Ofcom), the Office of the Energy Regulator (Ofgem), and the Office of the Water Regulator (Ofwat).

CCP's year end accounts at 31 July 2015 showed a net income of £184,467 which, together with our legacy fund allocation of £94,531, covered our expenditure of £250,149 to leave a surplus of £28,849. These figures are net of the £2,770 contribution the Centre made to UEA Consulting Ltd through the payment of fees for services rendered.

In addition to overhead income in the last months of 2014 from the ESRC Centre grant, which terminated in September 2014, CCP's income in the financial year 2014/15 was generated across multiple income streams as follows:

Net Overhead Recovery	£55,237
Conference Fees	£5,668
Membership Income	£5,667
Consultancy	£20,677
<u>Other Income</u>	<u>£15,737</u>
<u>Total</u>	<u>£102,986</u>

CCP continues to draw on its legacy funding during the financial year 2015/16. This legacy fund terminates on 31 July 2016.

### **Looking Forward**

UEA Schools have attracted new members of staff with research interests in competition policy and regulation. This sees the Centre set to expand its faculty with the arrival of Professor Kai-Uwe Kuhn (ECO), Sabine Jacques (LAW) and Dr Lily Samkharadze (NBS) in January 2016.

Catherine Waddams (PI), Amelia Fletcher (Co-I), Michael Harker (Co-I) and Tom Hargreaves (Co-I, ENV) have secured a two-year grant from UKERC to study affordability in energy. The grant will, in addition to buy-outs, support 5 Research Associates, some on a part-time basis.

The topic for the summer conference is "Competition Policy in Financial Markets" and will be organised locally by Amelia Fletcher and Andreas Stephan. The conference will take place 9-10<sup>th</sup> June 2016.

## **2 Summary of Activities by research theme**

This year the Centre has reconfigured its research programme into three themes, each with subthemes, as advised in last year's annual report.

### **2.1 Anticompetitive Strategies**

#### **Cartels**

In a follow up to the 2007 CCP Cartel Survey study which focused on public attitudes to cartels and price fixing in the UK, Stephan revisited the topic through four surveys of public attitudes, one for each of the following countries: the UK, Germany, Italy and the US. A key finding is that despite differences in attitudes to government intervention in markets and the trustworthiness of businesses, there is a presumption of open and competitive markets among respondents in all four jurisdictions. The survey was cited by officials from the US Department of Justice, European Commission, Germany's Bundeskartellamt and the UK's Competition and Markets Authority in speeches given at the 2015 Pros and Cons Seminar event, organised by the Swedish Competition Authority (Konkurrensverket).

In other work taking a legal approach, Mosunova considered the disclosure of evidence in cartel litigations in the EU. Stephan considered the innovative strategy used in Korea of rewarding individual informants as a viable means of unmasking a greater number of cartels. Stephan (with Ali Nikpay, formerly of the Office of Fair Trading (OFT) now a partner at Gibson Dunn) looked into the complex realities faced by companies considering applying for leniency in cartel cases. Stephan and Hviid concluded their research on whether bid-rigging should be a violation 'by object' under Article 101 TFEU. Summers completed his doctoral studies on the extent to which the European Commission's cartel fining policy adheres to fundamental rights.

Crede and Chowdhury investigated the existence, determinants, consequences, and prevention of post-cartel tacit collusion, i.e. the phenomenon that firms do not revert directly to competition after (price-fixing) cartels have ended. Crede developed a new empirical screen to detect cartels and date the beginning and end of illegal price fixing. The screen is applied to three European industries for pasta products, two of which featured cartels. The screen was able to detect the two cartels earlier than had been the case in reality and correctly found no cartel behaviour in the third.

#### **Potentially Anti-competitive Agreements**

Lu considered cases where firms offer a range of a particular type of product, a strategy referred to as proliferation. This practice has been under intense investigation in horizontally differentiated markets, where antitrust concerns have been raised in respect of excessive proliferation, which has been recognised as a means of deterring entry. In a working paper Lu finds that although it is only used as an entry deterrence strategy, such a strategy can be beneficial for both incumbent and consumers.

Powerful intermediaries managing the transfer of goods from producer to consumer, such as Amazon, Expedia, and price comparison sites, have caught the eye of both competition enforcers and academics and several CCP members have contributed to the literature seeking to understand the behaviour and effect of intermediaries. Lu has investigated the difference between a wholesale structure where the producer sells the goods to the intermediary who then sells it on to the consumer, with an agency model where the producer sets the price for the consumer directly. Building on work with Fletcher, Hviid summarises the case law and academic literature on a set of agreements between producers and intermediaries which restrict the prices charged to consumers. Akman, an associate member of CCP, has considered the legal basis for challenging such vertical agreements with horizontal effects.

#### **Mergers and Market Investigations**

Davies, Ormosi and Graffenberger published their study of the incidence of mergers after cartel detection to understand how markets react to cartel breakdown. The main findings of the paper are: a confirmation that, after a cartel breaks down, typically there is increased merger activity amongst the former cartelists; that the increased merger activity post-breakdown is most pronounced in those

cartels which are detected under leniency; and that a disproportionately high number of acquisitions are undertaken by the leading firms. The paper was nominated for the Antitrust Writing Awards 2015. Reader completed his doctoral studies on the use of a “public interest” test in merger analysis, and presented his empirical research on how public interest considerations have been accommodated in domestic merger control at the 4th BRICS International Competition Conference in South Africa.

Two reports for DG Competition account for a substantial part of our current work on mergers. The report by Ormosi, Mariuzzo and Havell provided a review of merger decisions in the EU, addressing the question of what we can learn from ex-post evaluations (this research is also reported under section 2.3 below). It offers a systematic review of ex-post evaluations (merger retrospectives) of the impact of merger decisions by EU competition authorities. It discusses what the findings of these studies may imply about the quality of merger decisions, introduces the relevant methodologies, and provides a framework for identifying errors in merger decisions.

Fletcher and Lyons completed a report on geographic market definition in EU merger control. Their report reviews the Commission’s approach to geographic market definition through the lens of ten detailed case studies which were selected for the controversy associated with geographic market definition. They set out appropriate economic principles and criteria by which to assess these cases. They find that the Commission’s practice is broadly appropriate but they propose a number of specific improvements that should be implemented.

## **2.2 Markets and Systemic Challenges**

### **Behavioural Biases, Vulnerable Consumers and Markets**

Deller and Waddams completed a detailed report for the Centre on regulation in Europe (CERRE) on affordability. This project explores measurement and policy on affordability across utility sectors within the European Union, combining extensive country and household level data with literature reviews. In addition to the main report, the project generated a large number of working papers. Deller and Waddams with various co-authors continue to explore the data on collective switching mechanisms which was generated from the “Big Switch” project. Deller, Hviid and Waddams have discussed their work on utilities and other regulated sectors with various stakeholders.

Dobson and colleagues analysed the micro-pricing behaviour in British groceries across three leading retailers over the moderation period 2004–7 and the crisis period 2008–10. They found that overall basket prices rose, but significantly more individual prices fell than rose in the latter period. Tests of obfuscation in price setting suggested that large numbers of small price falls were used to disguise the basket price rises.

Lyons and Mazzarotto analysed the use of behavioural economics in competition policy enforcement for financial product markets. Several CCP members, including Fletcher, Lyons and Sugden, have presented papers to academic and practitioner audiences regarding the use of behavioural economics in competition and regulation.

### **Digital and Information Industries**

Hanretty and Street with co-authors investigated the determinants of success in four international television awards festivals between 1994 and 2012. They found that countries with larger markets and greater expenditure on public broadcasting tend to win more awards, but that the degree of concentration in the market for television and rates of penetration of pay-per-view television are unrelated to success. Street with co-authors looked at Collective Management Organisations and their effect on creativity and cultural diversity.

Mariuzzo and colleagues have looked at the strategic use of updates to apps. They found evidence that updates have a strategic flavour and that developers use them as a tool to increase the “buzz” surrounding their apps in an attempt to improve users’ engagement and increase or maintain high app visibility. Hviid and Izquierdo presented their work on intermediaries in the video game industry as part of their project on intermediaries in the creative industries and Izquierdo continued her work on

the movie industry. Korfiatis with co-authors has produced a systematic literature review of Information Seeking for Musical Creativity. Harker and Street are working on the politics of media regulation. Harker and Reader have begun work on the implications of behavioural advertising on content diversity on the internet.

### **Healthcare and the Pharmaceutical Industry**

Several CCP members have worked on pay-for-delay agreements and other strategies used in the pharmaceutical sector both from an economic and a legal perspective. In one working paper, Gallasch criticises the European Commission finding that a pay-for-delay settlement in the EU constitutes a “restriction” by object in general. In a separate paper, Gallasch shows that pay-for-delay settlement can not only cause anticompetitive harm as a stand-alone agreement, but even more so as part of a broader unilateral strategy of the branded pharmaceutical company. Based on this research, Gallasch advocates the broadening of European antitrust scrutiny of these. This work was also the basis for a keynote address to an UNCTAD meeting.

Bokhari, Mariuzzo and Polanski have focused on the incentives involved in reaching pay-for-delay agreements and why they are stable. They combine the first mover advantage (for the first generic entrant) with the ability of the branded manufacturer to launch an authorized generic, and describe the conditions under which pay-for-delay deals are an equilibrium outcome. In particular, they find that the 180-day exclusivity period (the duopoly period for a winning generic in the American legal system) is neither a sufficient condition nor a necessary condition for pay-for-delay deals to arise. Bennato, Bokhari and Mariuzzo have begun an investigation of the impact of new product introductions and of additional pack varieties on growth of pharmaceutical firms. Initial results from the work were presented at the annual EARIE conference.

Guy has continued her work on comparing health care regulation in England and the Netherlands. Her work addresses the issue of how the new economic regulators for healthcare should work with the competition authorities, what competition in healthcare might mean, and how funding interacts with regulation.

## **2.3 Institutions**

### **Courts (including Private Enforcement)**

Private enforcement of competition law within the EU, in particular the challenges related to implementation, continues to be a focus for research for Peyer. In a paper published in *Journal of Antitrust Enforcement*, he discusses the problems which arise in follow-on actions with obtaining access to competition authority information. Peyer also uses a simple law and economics framework to analyse the EU Damages Directive 2014/104/EU that came into force in December 2014. He finds that the Damages Directive is unlikely to encourage victims to claim for compensation in the courts and as such fails in its compensation objective.

Von Graevenitz and Hanretty continue to work on issues relating to the Unified Patent Court as part of their ESRC Knowledge Exchange grant on this topic. Hanretty is working on linking data from first-instance patent courts with data from appeals to work out whether more experienced patent judges with subject-specific knowledge are less likely to be overturned on appeal. Harker is currently pursuing research projects which investigate the role of the EU courts in advancing liberalisation of network industries, the politics of media regulation, and the interaction of public service obligations and competition policy.

### **Regulation and the Regulatory State**

Kassim is currently working on projects on the institutionalization of DG IV, and with Francesca Vantaggiato and Kathryn Wright on the European Competition Network. Their paper on the latter has been accepted for presentation at the IPSA Conference in Istanbul in July 2016.

Vantaggiato has continued her research on energy markets and regulators with her book chapter on Euro-Mediterranean Energy Relations. The chapter looks at the evolution of the definition of Euro-

Mediterranean energy relations from the mid-1990s to the current day. Her research as PhD candidate at UEA looks at the case of regional networks of energy regulators with a view to explaining their establishment, analysing their workings and uncovering the incentives pushing regulators to join them and to be active in them.

### **Policy Evaluation**

Davies and Ormosi have continued their work on evaluation. Their two papers on estimating the deterrent effect of competition policy were used as the motivator for a DG Competition – CMA joint workshop on the indirect effects of competition policy. The authors were also invited by the CMA to participate in an in-house workshop to improve how the CMA accounts for its deterrent effects.

Ormosi, together with Mariuzzo and Havell won a EUR 50,000 bid from the European Commission to deliver a study of the ex post evaluation of EU merger cases. The study was finished in July 2015. The main findings of the study will also be published as academic papers.

Ormosi together with Tomaso Duso (DIW Berlin) completed a report for the OECD on evaluation, and Ormosi has presented this work at numerous venues, including the OECD.

## **2.4 Other CCP research**

Chowdhury has continued his theoretical and experimental work on contests. This work feeds into a number of CCP projects as it deals with competition among individuals and firms more generally. An important contribution is his survey, joint with Gürtler, in *Public Choice*, which considers the incentive for players to sabotage the work of others. While clearly this is of wider concern, it has relevance for competition policy in that such strategies raise rivals costs and hence are likely to have adverse effects on consumers.

Together with colleagues von Graevenitz has analysed the effect of patent thickets on entry into technology areas by firms in the UK. Their evidence indicates that patent thickets raise entry costs, which leads to less entry into technologies regardless of a firm's size.

## **2.5 Engagement and Impact**

Since a review of its media strategy in late-2014, CCP's media and communications channels have undergone a considerable revision in 2015 and, in turn, have surpassed expectations on many fronts. Highlights included the introduction of a new website design in March, a new system for reviewing our media performance using various analytics tools, and a significant increase in our social media activity and audience figures.

Relying on the excellent performance of its media and communications channels in 2015, CCP continues to maintain a prominent voice in wider academic and policy communities. However, we will continue to keep our media strategy under review and ensure that the lessons from 2015 enable us to make further progress in 2016. To assist, the Centre has been awarded a grant from UEA's Impact Support Fund to support and analyse our use of social media.

To report on our impact a longer view is necessary; we draw on activity and indicators of success from earlier years where relevant.

### **Consultation Responses**

CCP submitted eleven consultation responses during 2015 (comparable to the ten submitted during 2014). Across the two years we have submitted consultation responses to ten different organisations/committees. The CMA has received the most responses by far, with eight submissions across the two years. The retail energy market has been a core focus of CCP's consultation responses in 2014-15 with this market being the focus of nine submissions; such an emphasis is understandable as six of the submissions relate specifically to the CMA's Energy Market Investigation.

Analysing submissions from the start of 2013 onwards, consultation responses appear to be a core method for CCP to achieve documented impact. Waddams Price and Zhu (2015) is cited in both the

CMA's Updated Issues Statement and Provisional Findings documents for its Energy Market Investigation. Similarly, Fletcher, Karatzas and Kreutzmann-Gallasch (2014) is cited in the same Provisional Findings document and an earlier CMA working paper on 'Microbusinesses'. However, in general it is rare for CCP's work to be formally cited in consultation outcome documents; the only other example since the start of 2013 is Harker, Akman, Lovdahl Gormsen, Mehta and Waddams (2008) in documents relating to the Draft Consumer Rights Bill in 2013. However a thorough examination of consultation outcome documents reveals that, in addition to the examples cited above, evidence of CCP's contributions is clear in nine other consultations. Of these, six have identified CCP (although not by name) as making comments and observations raised by no other respondent, demonstrating the value added and public benefit of CCP's independent academic advice.

Beyond the current Energy Market Investigation and the Draft Consumer Rights Bill, strong/frequent referrals to CCP ideas that prompted a documentable response from the consulting organisation can be seen in the following consultation outcome documents: Deller, Hviid and Waddams regarding an Ofgem consultation on White Label providers (2014); Stephan and Waddams regarding various CMA guidance documents (2013); Hviid, Lyons and Stephan regarding the CMA's Vision, Values and Strategy (2013); Fletcher and Lyons regarding the EC's moves for More Effective Merger Control (2013); Bokhari, Davies, Davies, Gallasch, Guy, Heywood and Hviid regarding a consolidated set of Monitor consultations (2013); and Hviid and Waddams regarding Ofgem's enforcement activities (2013).

### **Blogging and tweeting**

CCP currently runs two Blogs, the Competition Policy Blog and the Research Blog. The Competition Policy Blog comments selectively on competition and regulation issues that particularly catch the Centre's attention. Comments are based on the understanding of the latest academic research and written in an accessible, non-technical style. The Research Blog (research@CCP) has been set up to disseminate and publicise CCP research work as widely as possible.

The Competition Policy Blog marked a number of milestones in 2015, owing to the success of several recent posts and the continued popularity of contributions from previous years. The past year has seen a slight increase in activity on the Blog, with thirteen new posts published this year compared to ten in 2014. These posts have addressed a diverse range of topics, such as energy, healthcare, election polling, broadcasting, pharmaceuticals, CO<sub>2</sub> emissions, and the private and criminal enforcement of competition law. Contributions have come from members across the four schools thereby underpinning the interdisciplinary commentary that the Blog strives to offer. In total, the Blog attracted 26,634 views in 2015 (+28.5% on 2014) and 13,898 unique visitors (+40.1% on 2014), both of which exceed the previous record figures set in 2013. This is indicative of the growing popularity of the Competition Policy Blog and, given that the Blog attracted visitors from 132 different countries in 2015, its international appeal is also becoming increasingly evident. Bokhari's blog post on 'The Economics of a \$750 Pill' (September 23, 2015) is a particular testament to the Blog's global reach. The post caused an immediate stir on social media and was viewed a record 1,635 times in its first week, with the majority of those views originating from the United States.

The CCP Research Blog (research@CCP) has continued as a secondary channel for disseminating CCP research news. The Blog has mainly been used to alert our readers to CCP seminars, to post session reviews from our Annual Conference, and to highlight instances where CCP research has been referenced in the public domain. Overall, 35 new posts were uploaded in 2015, which allowed the Blog to attract 2,564 views (1,631 unique visitors) from 74 different countries. 10.4% of views came courtesy of the live blogging from the Annual Conference on 18-19 June 2015.

CCP made a number of strategic changes in 2015 to how it uses its Twitter feed (@ccp\_uea) including follow-back, and user interaction. The result has been that our audience has more than doubled from 724 followers to 1644 followers during the last 12 months. By asking our members to alert us to their research activities in advance, we have been able to increase our Twitter activity by 67.8% with 359 new tweets posted in 2015. The tweets reflect the vast array of the Centre's activities, including conference presentations, seminars, publications and consultation responses, as well as the promotion and coverage of our Annual Conference. Particular highlights have included a tweet about Waddams'

BBC interview on the CMA Energy Market Investigation (which received 14 retweets and 5,500 impressions), and a tweet about Gallasch's keynote speech on Pharmaceutical Antitrust at the United Nations (17 retweets and 8,000 impressions). Activity peaked in the week of the Annual Conference when our 58 tweets received 16,911 impressions (a new record for total weekly impressions). There is also evidence to suggest that promoting CCP's web content on Twitter has a tangible impact on the number of downloads the website attracts. For example Working Papers 15-2 and 15-3 had 40 and 50 downloads respectively during the first month after posting and before being tweeted. During the two months following tweeting about these working papers, their downloads increased to 741 and 1,114 respectively.

### 3 Appendices

#### 3.1 CCP year on year

year	Average over last 3 years	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
Journals	25	20	19	36	23	23	32	36	24	15	13	16	14
Books	1	0	1	1	1	2	0	3	1	0	1	0	0
Book chapters	4	4	3	5	5	3	7	4	0	2	1	0	2
CCP working papers [+ others]	12 [17]	13 [+16]	9	13	14	17	19	11	35	21	20	10	4
Reports [commissioned]	5	8	3	3	1	2	2	0	5	2	1	2	1
Policy Blog posts	14	13	10	18	30	29	35	9	-	-	-	-	-
CCP events	4	3	4	4	3	3	5	3	4	4	5	3	1
CCP seminars	37	41	36	35	36	31	39	32	29	27	39	33	12
Responses to consultations	10	11	10	10	10	11	6	2	1	-	-	-	-
Faculty members	27	31	27	28	26	24	21	19	16			13	12
*RAs	6	4	4	11	8	5	7	5	3			4	1
*PhD students	21	20	22	22	19	20	19	17	15			15	12

\* Some double counting occurs where a CCP RA is also a CCP PhD student