Inequality: A Hidden Cost of Market Power
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In principle, lack of competition is increasingly recognised as a potential source of inequality, yet little quantification exists of this potential effect. The concentration of stockholding, in particular among the wealthy, means that the extra profits from market power accrue primarily to the wealthier segment of the population while higher prices from that market power are paid by all. The net effect is to reduce the purchasing power of those who hold little or no stock. Calibrating a new model to data in eight countries, we find that market power increases the wealth of the top wealth decile by between 12% and 21% for a range of reasonable assumptions about savings behaviour, while substantially reducing the share of income of the poorest 20%.

Inequality and competition

Recent economic research finds stagnation in median wages and an increased disparity between the incomes of different groups of the population in individual countries including, in some respects, the UK.1 While there is much dispute about the causes of inequality, traditional explanations include differences in human capital value, differences in demand for different types of workers and a reduction in fiscal transfers from rich to poor. Increasingly, market power has also been identified as contributing to increased inequality.2 The existence of market power has a dual effect on the income distribution, not only generating higher economic profits for business owners, but also imposing higher prices on consumers. The increased margins charged to customers as a result of market power will disproportionately harm the poor who will pay more for goods without receiving a counter-balancing share of increased profits. The wealthy, broadly defined, while paying more for goods, will at the same time receive higher profits from market power, due to their generally higher ownership of the stream of corporate profits and capital gains.
While market power is increasingly argued to exacerbate inequality, little research has focused on the potential size of market power’s impact on inequality.\(^3\)

This research helps to fill that gap by proposing a new model built up from macroeconomic identities and margins, while addressing limitations that existed in prior work. By making a comparative static analysis between states with existing market power and those without excess markups, we model the potential impacts of market power on wealth distributions for eight OECD countries: Canada, France, Germany, Korea, Japan, Spain, the United Kingdom and the United States. The countries were selected to ensure coverage of a large share of the world’s wealth, in light of data availability.

While this paper focuses on the benefits of increasing competition, it does not suggest that all sources of economic market power should be eliminated, instead treating as legitimate market power that provides incentives for innovation, like patents, trademarks and brand differentiation.

**How to explore the difference between a world with market power and one without?**

The dynamic steady-state model that we propose models the potential effect that higher prices would have on different groups of the population based on income, wealth and consumption distributions.

For this purpose, we make a comparative analysis between two alternative steady states: the first is the current state where business owners have market power, and which is characterised by observed distributions of wealth, income and consumption; the second is a hypothetical steady-state where markets are competitive and distributions of wealth, income and consumption are implied directly by the model and the reduction in mark-ups. We do not suggest that the economies examined are actually in steady state, but rather that the approach is a feasible and reasoned approximation to capture the essential features needed to compare situations with more or less competition over the long run.

Building up mainly from macroeconomic identities, the steady state equations for wealth and income provide the result that the redistributive effects of market power on wealth and income depend on a few key variables that can be either observed or estimated: a market-power indicator (mark-up); the income share of labour; the ratio between the average saving rate and the marginal propensity to save; and the observed difference between income and wealth shares in the presence of market power.

This model has the advantage of deriving measures of the redistributive effects of market power from observed data that vary across countries and of having a steady state solution emerging from dynamic relationships.

**Key factors underlying market power impact**

To explore how the transmission might occur, the model is then calibrated to reported data from different countries. The key variables are a market power indicator, wealth and income shares, the income share of labour and savings rates.

**Market power indicator**

The extent of market power is measured using mark-ups on average cost.\(^4\) The method includes a return on capital that is excluded from the calculation of the mark-up. The data used for these estimates covers the period 1975-2002 and is not purported to represent current mark-ups but rather average mark-ups over that time period in which wealth stocks have been built up. Arguably, these historical mark-ups, which are certainly among the most detailed estimates available, would have played a role in establishing today’s wealth distribution. The figures used are in line with those of other authors\(^5\) but have the merit of sector disaggregation.

The estimates of excess mark-up by country are calculated, for each sector, as the difference between the actual mark-up and the lowest observed mark-up across all countries in the sample. To illustrate, in the sector of wholesale and retail trade and repairs, the mark-up observed in the UK is 16% and the minimum mark-up (found in Germany) is 12%. The UK excess mark-up for that sector is then calculated as the difference, i.e. 4.0%. Weighting across sectors in proportion to output, the average level of the excess mark-up in the UK is 3.9%, with the relevant average for other countries varying depending on the differences in sector mark-ups and output weights.

**Wealth and income shares**

Wealth and income statistics are mainly drawn from the OECD Wealth and Income Database. Of interest, the families that lose the most from market power, in absolute as opposed to percentage terms, are likely to be those with a substantial income (and hence consumption) but low business ownership; this appears consistent with the observation that a “squeezed middle class” has experienced a sustained drop in real income.

The impact of competition on earnings is ambiguous. Some work in labour economics finds that even some lower-skilled workers may share in supra-competitive rents earned by firms. This effect may be particularly important in heavily unionised sectors. However, the underestimate of the redistribution of monopoly gains to workers may be smaller if the gains are largely distributed to high-income workers who can influence their own pay (such as CEOs, executive teams and top performers in the financial sector).

The families that lose the most from market power, in absolute terms, are likely to be those with a substantial income (and hence consumption) but low business ownership; this appears consistent with the observation that a “squeezed middle class” has experienced a sustained drop in real income.
**Income share of labour**

The income share of labour corresponds to the fraction of total income or output that is earned from labour, usually in the form of wages. The specific measure we use is adjusted for self-employment, whose remuneration is not defined as wages, but which should still be considered as a part of labour income. In practice, this is relatively constant across the countries examined.

**Marginal propensity to save over average saving rate**

The marginal propensity to save is the proportion of a marginal increase in household income that is used for saving or, in other words, that is not allocated for consumption. Thus, the marginal propensity to save corresponds to 1 minus the marginal propensity to consume. The average saving rate is the share of the total income that is saved by the household, that is, it corresponds to the ratio of savings to income.

There are a number of studies in the literature estimating the marginal propensity to consume, whose reported results range between zero and one. Reputable studies of permanent and unanticipated changes in income suggest, on average, a marginal propensity to save that ranges between 0.11 and 0.23.

With respect to the average saving rate, we use data collected by national statistical offices of the eight countries selected for the last 50 years. Across most of the countries, the average saving rates during that period range between 0.08 and 0.12, suggesting that the ratio of marginal propensity to save over average savings rates is between 1 and 2, and closer to the high end.

**What size of impact might market power have on inequality?**

The paper presents the main results on a hypothesised steady state impact of existing market power by country and by group of wealth. As an example, we find that a 1% reduction in mark-ups increases the wealth of the poorest 20 percent of the UK population by 0.2 percentage points. Their wealth therefore increases from 0.87 percent to 1.07 percent (an increase of approximately 20%).

Wealth impacts are calibrated for different savings ratios, at the 1, 1.5 and 2 levels. For the wealthiest 10%, if the marginal propensity to save is 1.5 or 2.0 times the average propensity to save, the average amount of wealth that can be attributed to market power is 21%. These calibrations suggest that the UK may experience among the lowest domestic market power impacts on wealth, with a figure of 8.3% of wealth coming from market power when the savings ratio is 2. If, as is less likely, the marginal propensity to save is equal to the average propensity to save, the average amount of wealth that can be attributed to market power is 6.0%, which we would consider as a lower bound derived from our model. If the wealthiest 10% has a much higher savings rate than the rest of the population, as some data suggests, an author simulation can lead to impacts of market power on wealth exceeding 40% in some cases.

The gains in real income from the absence of market power (resulting from higher purchasing power for consumption) are particularly focused on the bottom quintiles. As a result of the lost profits from reduced margins, the effective income for the bottom quintile rises by between 14 and 19 percent. The impact on effective income can be seen in Figure 1 that shows the extent of loss or gain to different income groups in the U.K. from a 1% reduction in excess margins.

The redistribution from increasing competition goes especially to augment earnings shares of the bottom 60% of earners and reduce those of the top 5% of earners. The earnings “bump” from increasing competition would be largest for the bottom 20%, due to their low share of total income. With similar findings for seven other countries, we conclude that the focus on the potential relationship between market power and inequality may be worth adding to the more established list of sources of inequality, such as differences in human capital and in demand for different types of workers. The current policy making debate on how and whether to address inequality may therefore usefully consider that reducing improper market power could help address one of the sources of inequality, to the extent that substantial increases in competition are achievable.

**Figure 1. Variation in income shares from an across the board 1% mark-up reduction**

References:

1. For example, Atkinson (2008), Piketty and Saez (2012) and Piketty (2014).
2. This has been noted by Baker and Salop (2015), Comanor and Smiley (1975), Creedy and Dixon (1999), Ennis and Kim (2016), Furman and Orszag (2015), and Rognlie (2015).
3. One exception is a study for the United States by Comanor and Smiley (1975), whose model has been updated and extended to other countries by Ennis and Kim (2016). The Comanor and Smiley (1975) model and assumed parameters for calibration was suggested to contain substantial limits by Baker and Salop (2015).
4. These are reported by Høj et al. (2007), who used the method developed by Roeger (1995) and Oliveira Martins et al. (1996), adapted from Hall (1988) to estimate sector-specific mark-ups for 17 countries, using the OECD-STAN database.
5. For example, Griffiths et al. (2006).
6. The purchasing power effect can be even larger than the price change effect (sometimes substantially) when there is dis-saving and the group has consumption that exceeds earned income (for example, as a result of transfers), as can occur most notably in the bottom quintile in some countries.
‘Big data’ has become a buzzword in antitrust circles, catching the attention of policy makers, enforcers, practitioners, and academics alike. Beyond doubt, the unprecedented technological capacity of information technologies to instantaneously collect, aggregate and analyse vast volumes and variety of data bears promising opportunities for growth and innovation. Yet the accumulation of enormous amounts of personal data also increasingly fuels economic, social and political concerns. As personal data constitutes an important input for successful online business models, the concentration of huge amounts of data within the hands of a few powerful online platforms is therefore increasingly perceived as enabling market power and creating entry barriers that prevent new, innovative competitors from entering digital markets. The widespread collection of personal data is also a source of broader concerns about data protection and privacy. Recent revelations surrounding the use of data analytics and social media data for targeted political advertising during the 2016 US Presidential elections and the Brexit referendum campaign have accentuated fears about the negative impact of large-scale collection of personal data on consumers, citizens and the democratic process.²
Against this backdrop, a debate has sparked amongst antitrust commentators as to whether ‘big data’ and privacy raise specific competition concerns and, if so, how competition policy should take them into account and tackle them. My study contributes to this debate by analysing how concerns about privacy and data protection can and should be integrated into merger control. The study shows that the current state of the academic discussion about the role of personal data for competition policy lags behind the actual decisional practice of competition authorities on both sides of the Atlantic. Whereas antitrust commentators are still in stark disagreement about the competitive significance of data and its adequate role in competition analysis, the US competition authorities and the EU Commission have been accounting for the role of personal data as potential source of entry barriers and market power in their merger control for quite some time. Most recently, in the takeover of the music recognition app Shazam by Apple, the EU Commission, for instance, assessed whether the control over Shazam’s user data would enable Apple’s streaming service, Apple Music, to better target customers and drive competing services from the market.

The way in which competition authorities have accounted for the role of personal data in merger cases is not without flaws. So far, their assessment has remained excessively one-sided as it focuses exclusively on the role of personal data as source of market power. EU and US competition authorities have, however, consistently refused to assess how data-driven mergers affect personal data protection and privacy. Privacy concerns, the orthodox mantra affirms, should be addressed by data and consumer protection regulation, not competition policy. My study challenges this view, arguing that it is grounded in an incomplete understanding of consumer welfare and turns a blind eye to privacy-related consumer harm. In 2014, the EU Commission, for instance, cleared the merger between Facebook and WhatsApp despite warnings from data and consumer protection groups that it might negatively affect users’ data protection. The Commission dispelled these concerns holding that Facebook and WhatsApp were unlikely to combine their datasets after the consummation of the merger and that such a combination would not strengthen Facebook’s market power. Less than two years after the Commission’s clearance quite the opposite happened: Facebook and WhatsApp announced the combination of both firms’ data sets to the detriment of users’ level of data protection. Negative examples, such as the Facebook/WhatsApp merger, show that privacy-related consumer harm still remains a blind spot in merger analysis. To fill this analytical gap my study maps out three potential theories to incorporate privacy-related consumer harm into competition policy. Competition authorities could, for instance, account for the impact of data-driven mergers by considering data protection as important element of product
quality.9 Along similar lines, data protection could be factored into competition analysis as a central aspect of consumer choice.10 Both approaches, however, confront competition authorities with the daunting task of quantifying reductions in the service quality or consumer choice and balancing them with potential pro-competitive efficiencies. A third, more promising way of incorporating privacy-related consumer harm into merger analysis consists of conceptualising personal data as non-monetary price consumers pay when using free online services and products. Drawing upon the economic ‘privacy-calculus’ literature,11 my study suggests that competition analysis could approach a decrease in the level of data protection resulting from a merger as being tantamount to a (non-monetary privacy) price increase.

The suggested ‘privacy price’ approach still leaves competition authorities with the question as to how this non-monetary increase in privacy price can be quantified and translated into monetary terms for the purpose of balancing it with potential welfare-enhancing efficiencies. In short, how can we put a price tag on privacy-related consumer harm? My study proposes the use of willingness-to-pay studies in the form of conjoint analysis as a methodology that enables competition authorities to quantify privacy-related consumer harm in monetary terms.12 Conjoint analysis is increasingly used in competition cases to measure consumers’ willingness to pay for non-price features of a specific product.13 I suggest that the conjoint analysis would provide competition authorities with an administrable methodological tool to measure and quantify the consumer harm likely to arise from the potential change in the level of data protection as the consequence of a merger. Unlike ordinary consumer surveys, which rely on stated preferences to measure how much consumers value data protection, conjoint analysis is less vulnerable to biases as it gauges consumers’ revealed privacy preferences through choice experiments that mimic a realistic market environment.

In discussing possible objections to this approach, my study also shows that the widespread opposition against the integration of privacy into merger analysis is based on a ‘privacy fallacy’. This ‘privacy fallacy’ derives from the erroneous assumption that deteriorations in the level of privacy protection as a consequence of a merger automatically amount to a breach of data protection rules, which should be addressed by data protection authorities, but which do not constitute a competition law concern. This view is erroneous in as far as it ignores that changes in privacy protection resulting from mergers might harm consumers without necessarily breaching data protection rules. As we are increasingly paying a non-monetary price through disclosure of personal data when we consume online service and products, it is about time that competition authorities look into privacy-related consumer harm.

References:
1. This article provides a summary of a study that has appeared as a EUI LAW working paper http://cadmus.eui.eu/handle/1814/58064 and will be published in Competition Law for the Digital Economy, Edward Elgar/Academic Society for Competition Law (ASCOLA), forthcoming.
6. Case C-238/05 Asnef-Equifax ECLI:EU:C:2006:734 [63], Case COMP/M.4731 Google/DoubleClick (n 4) [368]. Statement of Federal Trade Commission Concerning Google/DoubleClick (n 4) 2. Case COMP/M.7217 Facebook/Whatsapp (n 4) [164].
7. ibid [184] – [186].
10. Case COMP/M.8124 Microsoft/LinkedIn (n 26) [290] - [350]; see in particular [350].
Private sanctions do not play an equally important role for all types of offences. In related-party offences the contracting party is the one who suffers damage from the misconduct and can ‘punish’ the infringing business by taking its custom elsewhere. This future loss in sales internalises the cost of the damage, which may fully or partially substitute out the need for public sanctions. In third-party offences, those who suffer damages from the misconduct are not in a direct contractual relationship with the infringer, therefore social costs are not internalised - i.e. a public sanction is essential.

In a Coasean setting the role of sanctions (public or private) would be to ensure that the infringing business internalises the social costs of its misbehaviour. In this respect, public fines are only required to the extent that private sanctions do not fully internalise these social costs. Otherwise, the total cost born by the infringer will be higher than the total harm caused by the infringement. Apart from being allocatively inefficient, this could lead to over-deterrence, and unnecessary policing costs.

For this reason, any organisation in charge of sanctioning corporate misbehaviour should be aware of the magnitude of the private sanction triggered by such behaviour. The problem is that the measurement of private sanctions is not a trivial exercise. The 1980’s and 90’s saw a number of relevant research pieces, but it appears the topic has lost academic impetus in the last two decades. We intend to revisit this debate and propose a new solution to approximating private sanctions (reputational damages) by using opinion mining, a branch of natural language processing to gauge subjective information such as the sentiment in the media coverage of corporate misbehaviour. As an illustration of our proposal we offer an empirical analysis of European cartels.

Cartels are an interesting example of a related-party offence, where both public and private sanctions are in action. Focusing on cartels allows us to distinguish between non-atomistic and atomistic customers. The former can more credibly commit to a punishment, taking their custom elsewhere, and are also more able to influence the future price. Non-atomistic related-party customers would be typical in cartels higher up in the supply chain that directly affect a few large customers (for example the steel abrasive cartel). With atomistic customers, no customer can individually influence the overall deterrence level, the threat to terminate their contract is only credible if it is in every customer’s narrow self-interest to do so on receipt of harm. When the cartel is at the end of the supply chain, it typically affects atomistic customers (we refer to them as end-consumers), for example the exotic fruit (bananas) cartel.
reputational effects, with more coverage and more negative reporting implying increased reputational loss. The intuition behind this relates to the role of information in transferring reputational effect. Non-atomistic customers are more likely to be aware of cartel convictions even without extensive media coverage, but their atomistic counterparts are not (shockingly, most people do not follow DG COMP press releases). For this reason, the amount and quality of information transmitted by the media on the cartel is crucial for triggering the private sanction. We downloaded the media coverage of these cartels from Nexis.com. Figure 1 shows the distribution of sentiment scores in these news reports. Unsurprisingly, negative sentiment dominates.

We look at how the size of the sanction, and the frequency and sentiment of media coverage contribute to these changes in stock prices around these two events. Figure 2 shows the changes in stock market valuation (cumulative average abnormal return – CAAR) of cartel member firms around the detection and the decision dates. The drop appears more pronounced around the announcement of detection than the decision date, which seems intuitive, detection is more of a surprise to the market than the anticipated conviction.

One of our headline results is that an increase in the public fine (standardised by firm size) leads to a drop in market valuation if cartel customers are non-atomistic and both media exposure and sentiment were low. Conversely, an increase in fine leads to an increase in the share price return if the cartel serves atomistic customers and media exposure is low. This result was expected: large customers are well aware of the misconduct even when there is minimal public noise about the cartel behaviour and in this case the fine is a signal of the severity of the infringement. By contrast, an increase in fines is not so worrying for an end-consumer cartel if it goes under the radar (no media coverage). In this case no exposure of the misconduct is probably seen ex post as good news by investors.

**Figure 1. The distribution of sentiment in media reports on cartels**
(Source: The authors)

**Figure 2. The effect of news on cartel detection and conviction on stock prices**
(Source: The authors)
Media exposure has a critical role when customers are atomistic. We find that high media exposure damages the end-consumer cartel members only when the sentiment is negative; if ex-post the sentiment is positive (or not so negative), the effect on share prices can be positive.

Our research inevitably takes us to the question: are public and private sanctions substitutes or complements? We provide evidence that in the case of cartels, the relationship depends on whether the cartel is end-consumer (atomistic customers), or intermediary (non-atomistic customers). In end-consumer cartels the administrative penalty seems more likely to have a negative effect on the market valuation of the cartel if there is also reputational damage. This would imply that the two are complements. This seems intuitive if fines are directly proportional to cartel profit. If there is no reputational damage, (i.e. consumers are unaware of the cartel) businesses are less put off by the fine. One possible reason could be that they recover the public fine through higher future prices from customers. This would imply that for fines to have a deterrent effect, they would have to be accompanied by a reputational effect.

In intermediary cartels (facing non-atomistic customers), fines always have a negative effect, irrespective of how high the reputational effect is. What happens in this case is simply that our measure of reputational effect is not a good one, as customers of the cartel are more likely to be aware of the misconduct, irrespective of its public media coverage; i.e. there is a potential reputational effect even where media coverage is little. The finding that administrative fines further reduce the valuation of firms would imply that the reputational sanction did not fully internalise all damages imposed and adding a public sanction could help do this.

What can we take home from this in terms of policy implications? Competition authorities in charge of imposing fines seem unaware of or disregard the possibility of private sanctions and their role in deterring misconduct. This should not be the case. The dissemination of cartel convictions can be thought of as an endogenous factor, which can be influenced (controlled) by the authority for example if it wants to intensify the effect of private sanctions (naming and shaming).
Fairness is an increasingly important policy consideration in the traditional utility sectors (energy, water and telecoms). This will be exemplified by the introduction in early 2019 of a cap on the prices paid by energy consumers who have not changed their supplier or tariff during the previous three years. As a result, the recently concluded project ‘Equity and Justice in Energy Markets’, conducted at the Centre for Competition Policy (CCP) as part of the UK Energy Research Centre’s research programme, provides timely insights on questions of fairness in retail energy markets, using analysis from economics, law, human geography and policy studies.

The main policy implications have now been published in a report, ‘Fairness in Retail Energy Markets? Evidence from the UK’¹, launched at a lively event in London on 18 October. Attended by representatives from energy companies, consumer groups, regulators, and academia the event opened with speeches from UKERC Director Jim Watson and Ofgem CEO Dermot Nolan, followed by presentations on three of the project’s core themes. Eight supporting research papers are being prepared for submission to academic journals and will be posted on the CCP website.

The research team provides both an unusual breadth, and also academic independence in an area which often generates more heat than light. The research in ‘Fairness in Retail Energy Markets?’ does not define what constitutes fair or unfair, since this ultimately rests in the eye of the beholder. Instead, evidence is presented which is directly relevant to assessments of fairness or which has implications for interventions that are motivated, at least in part, by distributional concerns. The report underlines the central role of distributional concerns in the retail energy market’s political economy; the retail energy market and energy affordability seem likely to remain an area of political intervention unless the cost of energy falls substantially.

¹ The CCP research team: Front Row (l-r): David Reader, Noel Longhurst, Catherine Waddams. Back Row (l-r): Glen Turner, Elizabeth Errington, David Deller, Michael Harker
Key Findings
The evidence gathered in the report raises fundamental issues for the governance of the market. Firstly, the substantial increase in the share of household expenditure devoted to energy since 2003-04 helps to explain the political salience of the energy market. Secondly, this political salience has affected the independence of the regulator, Ofgem, with independence appearing less absolute and clear-cut than was originally envisioned. Regulatory independence has evolved, with governments altering Ofgem’s statutory duties and exerting pressure through less formal, non-statutory channels. Thirdly, we present evidence indicating problems with the main framing of fairness regarding energy in the UK, namely the concept of ‘fuel poverty’. The approach to analysing fuel poverty, and associated policymaking, would benefit from a reboot. More focus is needed on directly observable real-world phenomena which underpin the complex problem of fuel poverty, for example, low and precarious incomes, cold homes and health issues. Such an approach would likely encourage consideration of interventions beyond the traditional one of improving energy efficiency.

A wide range of evidence
A distinctive feature of the report is that it presents qualitative and quantitative evidence alongside each other. These two types of evidence are complements, offering different insights. For example, large-scale quantitative surveys can assess the prevalence of issues within a population of interest, whereas small-scale qualitative interviews reveal a depth of detail about households’ and practitioners’ experiences as they perceive it. Rather than making a choice between qualitative and quantitative approaches, an ideal approach may be to follow a continuous iterative cycle alternating between the two (where resources allow). Qualitative interviews can highlight areas of concern whose prevalence might be assessed by a subsequent quantitative survey, while restricted and structured survey questions may raise puzzles that can only be illuminated by in-depth interviews.

The report’s five main chapters utilise data from disciplines and methodologies rarely encountered together. This data includes: two sets of elite interviews; a 45-year time series of electricity bills; a 35-year time series of energy expenditure shares; detailed analysis of statutes, parliamentary debates and consultation documents; cross-sectional data from an energy-specific consumer survey; interviews with social housing tenants; a survey of micro- and small-businesses; and survey data from individual UK households followed over multiple years. In assembling this evidence, we are grateful to our partners Broadland Housing Association, Cornwall Energy and Ofgem, as well as to the Parliamentary Archive and all our interviewees. The methodology behind each piece of original evidence is provided in a methodological appendix at the end of the report.

Fresh insights on the policy making process
The report challenges several common perceptions. For example, it is not clear that consumers are intolerant of all energy price differentials, since regional electricity price differences have existed since at least 1970. Also, key affordability support policies, the Fuel Poverty Strategy and the Winter Fuel Payment, were introduced in the early 2000s when energy was at its most affordable since the mid-1970s. It is the timing of these energy affordability policies that leads to our doubts about the feasibility of ending political
intervention in the energy market. Additionally, the report explores how distributional concerns have been balanced against competition concerns in policymaking institutions. The formal route to communicate government objectives to Ofgem is through its statutory duties, but the weight afforded to individual statutory duties has become less clear over time as the number of duties has grown substantially. Elite interviews with members of the regulatory community indicate that, over the same period, instances of government exerting influence over Ofgem through less formal channels has occurred more than was originally expected. There was consensus among interviewees from the regulatory community that decisions concerning significant distributional objectives should rest with elected politicians rather than unelected regulators.

A multitude of findings to improve policy
Consumers engage with energy in a variety of ways, though policy has traditionally relied on rational economic models of behaviour, and policymakers have often framed consumers’ ideal behaviour in terms of that which would maximise competition. Engagement needs to be considered in terms that stretch beyond searching and switching. Interviews with social housing tenants facing energy affordability challenges showed these households’ considerable emotional engagement with controlling their energy consumption, even if they did not switch supplier or tariff. Moreover, the way we understand engagement by micro and small businesses (MSBs) needs to reflect differences from the domestic setting. Many MSBs have multi-year energy contracts which automatically limit the frequency of market engagement. Also, while intermediaries are heavily involved with MSB switching, many MSBs report a dislike for intermediaries’ marketing communications, suggesting that direct regulation of energy intermediaries may be beneficial.

The report raises questions around the official fuel poverty statistics and the emphasis on using energy efficiency to address fuel poverty. Our evidence emphasises the importance of persistently low incomes and/or sudden reductions in income in generating energy affordability difficulties. While some government initiatives to improve energy affordability are income based, much of the effort to reduce fuel poverty has focused on energy efficiency. However, we find that, despite social housing having the highest average energy efficiency of any tenure, social housing tenants’ median energy expenditure share is persistently higher than that of tenants in private rented accommodation. Furthermore, qualitative interviews illustrate how individual social housing tenants can struggle to afford energy, even in energy efficient dwellings. Initial findings from large-scale panel data also show that fuel poverty appears to be a relatively dynamic phenomenon. If the primary policy objective is addressing the affordability of energy rather than reducing carbon emissions, other policy options beyond energy efficiency may need to be considered.

Lastly, the report discusses the quality of the data available to address distributional questions related to the retail energy market. A significant ‘missing data’ issue affecting energy expenditures for households with prepayment meters in the Living Costs and Food Survey (and its precursors) prior to 2013 means the average energy expenditure for low income households is underestimated if the data is left uncorrected. Another fundamental issue with fuel poverty statistics based on energy expenditures is their limited overlap with households reporting an inability to afford adequate warmth. All of the report’s quantitative analysis is based on the re-use of pre-existing datasets highlighting the likely benefits for policy making from providing widespread access to anonymised survey data commissioned by sector regulators.

References:
Are slot remedies sufficient in airline mergers? The currently hypothetical case of IAG/Norwegian

Tom Carr, PhD Student

On the 12 April 2018 the BBC reported that International Airlines Group (IAG) had acquired a 4.6% stake in Norwegian Air Shuttle (Norwegian). IAG (which includes BA, Iberia and its most recent acquisition, Aer Lingus) responded that their “minority investment is intended to establish a position from which to initiate discussions with Norwegian, including the possibility of a full offer for Norwegian”. Norwegian is bigger than Aer Lingus at Gatwick, has a higher route overlap than BA had with Aer Lingus, and is currently an industry disrupter in the lucrative transatlantic market. Will the standard remedy of a few slot divestitures be sufficient to address the competition concerns, or is it time to start blocking mergers?

This is the latest expansion and consolidation move by IAG, despite concerns raised by competition authorities at each of its prior expansions. In IAG/Aer Lingus, the European Commission’s concerns were about overlaps on some routes, and the possible loss of Aer Lingus customers connecting with rival long-haul flights. The latter was remedied by a requirement for IAG to enter into connection agreements with long-haul rivals. Following standard practice, the overlap concerns were remedied by the divestment of five slot pairs at, somewhat surprisingly, Gatwick (i.e. not at Heathrow where the Commission appeared to have most concern).

Some market context
Airlines operate in a unique regulatory environment:
- Ownership rules prevent consolidation outside of the EU and can restrict the ability of airlines to fly internationally;
- ‘ Freedoms of the air’ (the ability to fly) are set out in often restrictive bi-lateral air service agreements – things are more liberal under the EU-US open skies agreement for traffic between Europe and the US but not as liberal as in the internal aviation market of the EU;
- At congested airports, airlines must acquire landing slots to access airports, these are not linked to specific services; and
- Competition authorities usually view airline competition as taking place on a city pair basis.

The transatlantic market (EU to USA and Canada) is dominated by the three airline alliances providing 87 per cent of total capacity. From London to the US, IAG and One World are the dominant capacity providers. While still relatively small, Norwegian has expanded fast and has ambitious growth plans. It has a pan Europe low cost short-haul network based around a fleet of modern aircraft. It is the largest player in Europe rolling out low cost long-haul, taking advantage of efficient aircraft to fly mostly across the Atlantic. Its capacity over the Atlantic doubled between
Norwegian’s right to fly and the major European carriers are American airlines and unions fought a regulatory challenge to Norwegian’s right to fly and the major European carriers are launching low cost long-haul fighting brands.

Route pairs and slot divestments

Let’s get back to merger remedies. Airline markets are typically defined on a route pair basis; that is travel between cities, or in some cases specific airports within a city. This works well for point-to-point operations and reflects the competition we see between the likes of easyJet and Ryanair. It is the general approach that competition authorities employ for overlap routes to facilitate new entry in congested airports. IAG remains subject to several slot divestment remedies from prior mergers, even before the purchase of Aer Lingus in 2016. The Commission’s key concern in the latter was the Heathrow to Dublin route. Heathrow was considered to be a differentiated product to other London airports, yet the Commission applied a wider market definition including both London Gatwick and London City airports.

To clear the merger the commission required: “the release of five daily slot pairs at London-Gatwick airport to facilitate the entry of competing airlines on routes from London to both Dublin and Belfast; and Aer Lingus continuing to carry connecting passengers to use the long-haul flights of competing airlines out of London-Heathrow, London-Gatwick, Manchester, Amsterdam, Shannon and Dublin.”

Another reason the slot remedy appears odd, is that it is stated in the Commission’s report that there was no problem in getting slots at Gatwick. This is reflected in the relative cost of purchasing slots at Gatwick (c.£1m) compared to Heathrow (£10-20m+). The value of the merger for IAG was in the Heathrow slots.

Slot remedies provide a static solution to a dynamic market. Most slots are flexible: airlines use them to deploy aircraft to fit their strategy and fit demand. Remedy slots on the other hand are generally ring-fenced for a purpose, which means that an entrant must compete on that specific route regardless of how those slots could best be utilised by an entrant. It also means that, in this instance, IAG’s slot holding grows (as not all acquired slots are divested) but with windows for targeted competition on routes that may or may not be strategically important for IAG. Given the number of slots that would be purchased with Norwegian at Gatwick, the effect of prior remedies would likely be muted. Would, then, another slot divestment be an appropriate remedy?

In this currently hypothetical case, no. Whilst individual divestments may facilitate entry on specific routes, they do not facilitate competitive entry across the macro market, in this case the transatlantic. Under the sway of any of the alliances, Norwegian loses its position as a disruptor and its ability to grow into the varying routes available across the Atlantic. Its strategic independence as an innovator makes it a greater competitive threat than simply being a low-cost airline on a few specific routes. Competition agencies must adopt a longer term, more strategic approach to ask: whether airlines can sustainably enter routes on limited slots; whether more competitive pressure can be generated by allowing more liberal use of slots; and, in this case, whether the merger should be blocked.

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References:
1. A brief review of flight comparison sights such as Skyscanner indicates that for both London to Chicago and New York flying in a couple of weeks one-way Norwegian was less than half the price of the next cheapest airline. Checked on 27 April 2018 to fly on 18 May 2018.
2. It took three years for the DoT to provide Norwegian a Foreign Carrier Permit given the level of position. See Department for Transport (2016), Final Order, Docket DOT-OST-2013 0204, 2 December 2016
3. Notably Lufthansa operates Eurowings for low cost long haul and KLM-AirFrance has launched Joon.
4. Iberia/Vueling (M.5364), the British Airways, American Airlines and Iberia joint venture (see MEMO/10/330 and British Airways/BMI (M.6447)
5. London Stansted, London Luton and Southend airports were excluded from the market definition.
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CCP 15th Annual Conference

6-7 June 2019, London

**Machine Learning and AI as Business Tools:**
**Threat or blessing for competition?**

The power of modern computing including Machine Learning and AI represents a transformation in technology with potentially profound impact on the market place. Such disruptive innovation has the potential to fundamentally increase competition in all sectors of the economy. But there are also considerable concerns that exactly the same forces might allow greater exploitation of consumers by facilitating and even automating anticompetitive behaviour and preying on consumers by taking advantage of limited attention, information processing, and boundedly rational behaviour. In this context there is a pressing need for a better understanding of how competition is likely to evolve, how compliance can be ensured and how to avoid long term domination by a small number of powerful players.

This conference will touch on themes such as algorithmic pricing and competition, targeted advertising and consumer protection, as well as the use of algorithms and AI to enhance the position of the consumer in the market. In addition it will explore algorithms and AI as tools for the enforcement and for academic research and their potential role in improving how we monitor and evaluate markets. The conference is organised at the interface of social and computer sciences to bring insights from both disciplines to understanding the potential threats and blessings that AI might imply for competition.

Keep up to date with news on the 2019 Annual Conference
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Well, it is me again! Our efforts in finding a new Director took a little more time than expected but I am pleased to announce that, from January 1st 2019, Professor Sean Ennis will take over as the third Director of CCP.

Sean comes to us following his work as a Senior Economist at the Competition Division of the Organisation for Economic Co-operation and Development (OECD) engaged in economic analysis for competition law and policy, with a particular focus on competition assessment of regulations. Previously, he was the Executive Director of the Competition Commission of Mauritius from 2011 to 2013. I have no doubt that he will enhance the success of the Centre and, without compromising the strengths the Centre has, lead its research in new and exciting directions.

There are a number of other personnel changes to report on. At the end of November, the founding director of CCP, Professor Catherine Waddams, will retire from UEA but will continue as a member. October saw us say goodbye to research associate Dr David Reader who has joined the law school at the University of Newcastle, and Dong Myong Kim’s two-year research fellowship sponsored by the Korean government also came to an end, and she has returned to the Korea Fair Trade Commission. We have however welcomed several new members to the Centre, including Dr Michael Kummer and Professor Ted Turocy from the School of Economics and Mr Elias Deutscher and Mr Tim Vickers from the UEA Law School. This semester has also seen new PhD students embark on their research careers and we have welcomed Ellie Dobbyne, Anush Ganesh, Felix Hempel and Jennifer Young from the UEA Law School, and Prachi Hejib and Selvin Thanacoody from the School of Economics to the Centre.

The highlight of this period was, as usual, our 14th Annual Conference which took place in June and looked at the topic of ‘Competition Policy and Industrial Policy: Is there a need for a new balance?’. The conference brought together insights from legal, political and economic perspectives and debated a broad range of topics concerning the tensions between competition policy practice and new goals for industrial policy, whilst offering ideas on how we can rebalance policy goals and design the competition regime of the future. The conference was very well received with much positive feedback from delegates who commented on the excellent range of speakers and the engaging discussion.

One of our large projects ‘Equity and Justice in Energy Markets’, which was undertaken as part of the UK Energy Research Centre (UKERC) research programme, has now ended. This was marked in October by the launch of a report, ‘Fairness in Energy Markets? Evidence from the UK’, which summarises the key findings from this multi-discipline research programme – you can read more on this on page 11. Work has started on a funded CERRE project led by Dr Sally Broughton Micova, which is looking at regulation and competition within audiovisual advertising; and on a Bureau Européen des Unions de Consommateurs (BEUC) funded project on Network Tariffs, led by Professor Catherine Waddams; and is soon to commence on a comprehensive review of anticompetitive laws and regulations in the Philippines, led by Professor Stephen Davies.