

Institution: University of East Anglia		
Unit of Assessment: 17 – Business and Management Studies		
Title of case study: Reducing household energy prices through regulation design		
Period when the underpinning research was undertaken: 2000 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Catherine Waddams Price	Professor of Regulation	2000 - 2018
Morten Hviid	Professor of Competition Law	2000 – to present
David Deller	Senior Research Associate	2013 – to present
Graham Loomes	Professor of Economic Behaviour and Decision Theory	2001 - 2009
Miguel Flores	Research Associate at CCP	2012 - 2014
Minyan Zhu	Research Associate at CCP	2010 - 2014
Ana Moniche	Research Associate at CCP	2012 - 2013
Joo Young Jeon	Research Associate at CCP	2012 - 2017
Period when the claimed impact occurred: August 2013 - 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact <p>UK households spend more than GBP20,000,000,000 per year on energy. Among the poorest 10% of households, energy expenditure accounts for 11% of total spending. Research by Waddams and colleagues at the Centre for Competition Policy (CCP) identified reasons why consumers fail to shop around for money-saving deals. By challenging orthodox assumptions about consumer behaviour and analysing the effects of regulatory intervention, CCP's research had a "<i>considerable and sustained impact on regulatory and policy decisions</i>" (Energy Regulator Ofgem's CEO, S5). The results informed a major competition review of the energy market, and the design of the subsequent cap on prices for consumers who had not recently changed suppliers, which is estimated to have saved GBP1,000,000,000 on household bills (S5).</p>		
2. Underpinning research <p>A key argument in favour of allowing competition in markets is that competition gives firms incentives to offer consumers better deals, which ultimately benefits consumers through, for example, lower prices. This argument crucially assumes that consumers are aware of better offers available in the market and are willing to act and switch their custom to another firm which makes a better offer. Since the early 2000s, CCP research has challenged this traditional economic model, showing that many households are 'inactive', in that they systematically decline to take advantage of better deals, particularly in the energy market. Furthermore, through revealing the reasons that consumers do not switch suppliers, the research demonstrates why certain policy remedies which would be appropriate assuming 'rational' consumers have harmful unintended consequences in markets where many consumers are inactive.</p> <p>A. Why do consumers leave money on the table and pay a loyalty premium?</p> <p>In the context of the gas market, Giulietti <i>et al.</i> (R1) used a series of specially designed surveys to identify how many consumers were (not) switching, their characteristics and motivations for their (in)action, and analysed the interactions between these factors. These data demonstrated the considerable market power bestowed on the gas incumbent through consumers' 'loyalty'. Subsequent research established that those consumers who did switch were motivated by expected savings, while savings alone were insufficient to activate a majority of consumers. Flores and Waddams Price (R2) identified the role of marketing and the importance of respondents' attitude to general shopping, dividing them into 'shoppers', 'time-poor' and 'loyal'. For example, they found that housing tenure and age were only associated with switching energy supplier amongst the 'shoppers' group, while financial pressures were related to searching and switching only among 'time-poor' consumers. Waddams Price and Zhu (R3) confirmed and elaborated on the differences between consumers in their actions and attitudes, for example establishing a link between less switching among older people and their lower expectations of gains from switching.</p>		

Deller *et al.* (R4) observed decisions in a large collective switch and showed that while the strongest incentive for changing was the financial gain offered by a switch, non-financial factors were significant deterrents, including supplier preference and uncertainty about the switching process.

These four papers demonstrated the gains and losses to different groups according to vulnerability arising from disability, age, housing tenure, educational qualifications, access to internet or low income. Households with different characteristics respond differently to market opportunities, generating significant distributional consequences. The benefits from lower prices accrue primarily to active consumers, while inactive counterparts generally pay more. These inactive consumers tend to be disproportionately from more vulnerable or disadvantaged groups, so these different market responses exacerbate inequality. This line of research anticipated, and helped establish, interest in behavioural economics; and, in policy circles, in how behavioural factors affect the outcomes and welfare of different groups.

B. Supply side Regulatory interventions

Ofgem had addressed the perceived unfairness of higher prices for inactive consumers by a series of constraints imposed on companies' charges. Such intervention raises fundamental trade-offs between the immediate protection offered to inactive consumers and lost opportunities for active consumers to save by switching, as well as any longer-term benefits from rivalry in the market which regulation may inhibit. In particular, Hviid and Waddams Price (R5) demonstrated that Non Discrimination Clauses, which were designed to protect inactive consumers by tying their prices to those offered to more active consumers, were likely to soften competition and consequently mean **higher** prices for all consumers. Waddams Price and Zhu (R6) showed empirically that companies did indeed 'retreat' to their home areas following these interventions, reducing effective competition.

3. References to the research

An initial version of most journal articles had previously been published as a CCP working paper, which was often the initial source of impact. Details of both publications, including both titles where these differ, and dates, are provided for each article in the list below.

*Empirical studies using consumer surveys and decisions on **consumer behaviour** in the energy market, including **distributional implications**:*

- R1** Consumer Choice and Competition Policy: A Study of UK Energy Markets. Giulietti, M., **Waddams Price, C.** and M. Waterson. (2005) *The Economic Journal*, Vol. 115, No. 506, 949-968, DOI: 10.1111/j.1468-0297.2005.01026.x
- R2** Consumer behaviours in the British retail electricity market **Flores, M.** and **C. Waddams Price.** (2013). CCP working paper 13-10 <http://competitionpolicy.ac.uk/documents/8158338/8235394/CCP+Working+Paper+13-10.pdf/2ee68805-470a-4fea-b5f7-7678f52b9971>
The Role of Attitudes and Marketing in Consumer Behaviours in the British Retail Electricity Market (2018) *The Energy Journal*, 39, 4, 153-179. DOI: 10.5547/01956574.39.4.mflo
- R3** Searching and Switching: Empirical Estimates of Consumer Behaviour in Regulated Markets. **Waddams Price, C., Webster, C.** and **M. Zhu.** (2013) CCP working paper 13-11 <http://competitionpolicy.ac.uk/documents/8158338/8235394/CCP+Working+Paper+13-11.pdf/96adc02f-dd01-4d07-b5b0-f5e5404d07a1>
Empirical Evidence of Consumer Response in Regulated Markets. (2016) *Journal of Competition Law and Economics*, 12, 1, 113-149. DOI: 10.1093/joclec/nhv041
- R4** Who Switched at The Big Switch and Why? **Deller, D., M. Giulietti, J.Y. Jeon, G. Loomes, A. Moniche** and **C. Waddams.** (2014) Report for Which? <http://competitionpolicy.ac.uk/documents/8158338/8194340/Big+Switch+-+Results.pdf/2e01588d-6564-4e28-b06d-233eaad389c4>;

(2017) Switching Energy Suppliers: It's Not All About the Money.

Deller, D., M. Giuliatti, G. Loomes, **C. Waddams Price**, A. Moniche Bermejo and **J.Y. Jeon**, CCP working paper 17-5

<http://competitionpolicy.ac.uk/documents/8158338/17199160/CCP+WP+17-5+complete.pdf/fdaaed88-56e5-44f9-98db-6cf161bfb0d4>

(2021, **pre-print published July 2020**) *The Energy Journal*, 42, 3, 95-120 DOI: 10.5547/01956574.42.3.ddel

Papers analysing regulatory measures, including non-discrimination clauses:

R5 Non-Discrimination Clauses in the Retail Energy Sector

Hviid, M. and **C. Waddams Price**. (2010) CCP working paper 10-18

<http://competitionpolicy.ac.uk/documents/8158338/8256105/CCP+Working+Paper+10-18.pdf/648ef925-153a-4e2d-b8ef-1395ee94270a>

(2012). *The Economic Journal*, 122, 562, F236–F252) DOI: 10.1111/j.1468-0297.2012.02537.x

R6 Pricing in the UK Retail Energy Market, 2005 – 2013.

Waddams Price, C. and **Zhu, M.** (2013) CCP working paper 13-12

<http://competitionpolicy.ac.uk/documents/8158338/8235394/CCP+Working+Paper+13-12.pdf/13a08bb0-350d-4d91-ab51-33f42cb26887>

Non-discrimination Clauses: Their Effect on British Retail Energy Prices. (2016) *The Energy Journal*, 2016, 37, 2, 111-132. DOI: 10.5547/01956574.37.2.cpri

Grants:

Waddams Price was PI and founding director of CCP, which was awarded over GBP8,000,000 of research council funding between 2004 and 2018.

Project: Centre for Competition Policy. PIs: **Waddams, C.**, Davies, S., **Hviid, M.** & Lyons, B. Funder: ESRC. Grant value: GBP3,110,099. Dates: 2004-09

Project: CCP Centre for Competition Policy Phase 2. PIs: **Waddams, C.**, **Hviid, M.**, Davies, S., Harker, M., Kassim, H., Lyons, B., Funder: ESRC. Grant value: GBP4,552,018. Dates: 2009-14

Project: CCP Equity and justice in retail energy markets. PIs: **Waddams, C.**, **Deller, D.**, Fletcher, A., Hargreaves, T. & Harker, M. current and future energy systems: Funder: EPSRC. Grant value: GBP491,469. Dates: 2016-18

4. Details of the impact

After households in Great Britain were given the ability to choose their energy supplier from 1999, there were growing public and political concerns that companies were charging excessive prices because of weak competition, especially to inactive consumers who did not 'shop around' for a better deal. From 2009 Ofgem introduced several measures to constrain the prices companies could charge, and to encourage households to identify and switch to cheaper offers. These included non-discrimination clauses which prevented companies from imposing higher mark-ups in their home regions, where they had an inherited base of consumers, than in other regions where they were competing to attract customers from other suppliers. While the non-discrimination clauses were not renewed after their initial three-year term, the regulator introduced further measures in 2013. The 'four tariff rule' aimed to simplify price comparisons and stimulate consumer activity by restricting the number of tariffs which each company could offer in each region. However, switching rates remained low and public concern about exploitation, particularly by the large companies with an inherited base of consumers, persisted, and was reflected in party political proposals for intervention in the market. These concerns culminated in a major competition review of the energy market by the Competition and Markets Authority (CMA) between 2014 and 2016. CCP brought its research findings to the attention of the CMA through eight written responses to CMA consultations and an extensive oral hearing with the relevant group and staff.

1. CMA finding of weak consumer response and consumer detriment

Informed by CCP's research, the CMA developed a new understanding of the important role that the presence of inactive consumers played in the dynamics of the market. The Chair of the CMA Energy Market Investigation group, wrote, "*The CCP's work was particularly valuable in two areas.*

The first was around how consumers chose their energy suppliers. The CMA's historical view was that consumers reacted quickly to prices and would seek out the cheapest supplier. The CCP's work both demonstrated that this was not the case in energy markets and also offered key insights on the reasons why it was not." (S1). This new conceptual understanding led to one of the main findings of the CMA review: weak consumer response which significantly inhibited competition in household energy markets. Several CMA publications (S2, S3, S4) cite CCP research extensively, and the CMA invited CCP *"to an oral hearing in front of the whole inquiry group - something we did for only one other academic group"* (S1). The CMA estimated that energy consumers were each forgoing up to GBP300 a year saving on their energy bills because of their inertia, a total detriment of GBP14,000,000,000 a year. Design of the CMA's extensive consumer survey, which has become an important source of information for subsequent analysis and policy development, was underpinned by CCP research. The chair of the CMA Energy Market Investigation group reported that the CCP work: *"...provided the basis for our own very extensive consumer survey – probably the biggest ever carried out – and CCP's advice was critical in the design of that survey...."* (S1).

2. Repeal of regulatory interventions, in particular the four tariff rule

The CMA used CCP evidence in identifying the harmful effects of two Ofgem interventions. Research by Waddams Price and Zhu (R1) was cited in the CMA updated issues statement (S2) as evidence on the detrimental effects on competition arising from non-discrimination clauses such as the 'four tariff rule'. The chair of the CMA Energy Market Investigation group wrote, *"The CCP's second, and less-expected, contribution was around the dangers of ill-judged regulatory interventions. This led us to recommend, and Ofgem to implement, the removal of a number of Ofgem regulations, notably the 'four tariff rule'."* (S1). The CMA found that this four-tariff rule had led to companies withdrawing low price offers, particularly innovative tariffs which were beneficial to over 200,000 low-income householders over 60 years of age, and to consumers of small amounts of energy who were more likely than average to have low incomes. Removal of the regulatory constraint enabled these households to benefit, as well as strengthening general competition pressures which would benefit consumers overall (S4).

3. Design of the price cap for inactive consumers

Following the CMA report, the government decided to adopt the minority recommendation of capping the prices which energy suppliers could charge to consumers who had not recently engaged in the energy market, even though the main CMA group had concluded against such a move. Imposition of the cap required primary legislation, and CCP was *"involved throughout this debate with Parliament"* (Ofgem CEO, S5). CCP submitted an extensive response to the pre-legislative consultation and Waddams was invited to present oral evidence. One apparently attractive proposition was to link the prices charged by companies to loyal consumers to the lower prices which they offered to more active households. However CCP research had demonstrated that the earlier 'non-discrimination' clauses, which had similarly linked the prices charged to less active consumers in companies' home areas to those offered in other regions where they were recruiting new customers, had hampered competition and led to higher prices (R5, R6). A relative cap was rejected and CCP's evidence on previous regulatory interventions (based on outputs R5 and R6 which had formed the basis of this part of CCP's consultation response) was widely cited both in the report of the pre-legislative committee (S6) and in a House of Commons briefing on the energy market (S7) (the page/paragraph numbers are given with the sources in section 5). Ofgem's CEO states that Ofgem estimated that *"...its immediate impact would be to save customers up to £1bn [GBP1,000,000,000] a year, through reducing the degree of market power enjoyed by the bigger firms as well as forcing them to rapidly become more efficient,"* (S5).

CCP's impact continues in the regulator's considerations of whether and when to lift the price cap for consumers who do not switch suppliers, as required by Parliament. Ofgem's framework reflects CCP's contribution to the debate around the imposition of the cap, in particular how effective competition is to be interpreted in a market for an essential service with low consumer engagement (CCP's definition of effective competition, in particular with respect to price discrimination (R5), is extensively cited in the framework, S8).

4. Wider Impact of the Research

The CEO of Ofgem at the time of the CMA investigation and the introduction of the price cap, noted that *"The CCP research was also influential in bringing the 'loyalty premium' into wider public discourse, and was particularly effective in introducing the concept of fairness into economic regulation"*, stating that *"Previously, very few if any economic regulators would have used such terminology or studied the distributional effects of regulatory actions... but the patterns of consumer behaviour and market outcomes studied by the CCP aided us in thinking more coherently about these matters"* (S5). The fundamental challenge by CCP research to the *"conventional theory of market competition and consumer engagement"* (S5) extends both internationally and across sectors. For example, in Australia, the Victorian Essential Services Commission based the review of its own default tariff in 2019 on CCP research (S9). Beyond energy markets, CCP research influenced the super-complaint across markets in the UK by the consumer organisation Citizens Advice (S10). The CEO of Ofgem wrote further, *"The overall impact of the research was considerable, and not just in the energy market. It represented a questioning of the conventional theory of market competition and consumer engagement that is taught to all students of microeconomics... [T]he evidence was... compelling... Moreover the loyalty premium research has now impacted other markets such as telecoms and financial services, particularly insurance, where similar questions...are being asked"* (S5). The Chair of the CMA Energy Market Investigation group stated that *"What was once heresy is now close to being dogma, and for that the CCP's work has been a key driver"* (S1).

5. Sources to corroborate the impact

- S1** Statement from the Chair of the Competition & Markets Authority Energy Market Investigation, 2014-2016 (June 2020).
- S2** Energy Market Investigation Updated Issues Statement. Competition & Markets Authority, February 2015 (p. 36, fn 30)
- S3** Energy Market Investigation: Provisional Decision on Remedies. Competition & Markets, March 2016 (p. 395, fn 799; p.418, fn 860; p.441, fns 897 & 899; p.442, fn 900; p.443, fn 914)
- S4** Energy Market Investigation: Final Report. Competition & Markets Authority, June 2016 (paras 9.485; 12.372; 13.37, 13.109, fn 85, 13.208, fn 143, 13.292, 13.409, fn 319, 13.346, 19.62, fn 8, and Appendix 11.1 para 22)
- S5** Statement from the CEO of Ofgem, 2014-2020 (May 2020).
- S6** Pre-legislative scrutiny of the draft Domestic Gas and Electricity (Tariff Cap) Bill, Fourth Report of Session 2017-19. House of Commons Business, Energy and Industrial Strategy Committee, February 2018 (paras 21, 45, 46, 53, 58 (2), 76)
- S7** The Current Energy Market Reforms in Great Britain. House of Commons Library, March 2017 (p.15)
- S8** Decision – Framework for assessing whether conditions are in place for effective competition in domestic supply contracts. Ofgem, October 2019 (pp. 51-52.)
- S9** Assessing the competitiveness and efficiency of the Victorian energy retail market, Framework and approach. Essential Services Commission, December 2019 (p.12)
- S10** Excessive prices for disengaged consumers: A super-complaint to the Competition and Markets Authority. Citizens Advice, December 2018, (p. 46, fn 157 and p.71)