

<b>Institution: University of Warwick</b>
<b>Unit of Assessment: 18 – Economics and Econometrics</b>
<b>Title of case study: The Impact of Consumers on Competition</b>
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>Professor Michael Waterson demonstrated how two consumer activities – search and switching – are necessary if competition is to benefit consumers. He showed how search and switching costs inhibit the competitive process; highlighted how firms increase these costs in retail, banking, insurance and energy markets, and recommended government measures to empower consumers. Regulators around the world have used Waterson’s research to enhance the consumer benefits from competition. Professor Gregory Crawford also analysed switching costs, estimating the costs of automatically renewable contracts in the UK telephone market. Based on this analysis, Ofcom banned rollover contracts for all residential and small business customers of voice telephone and broadband services, reducing households’ and small businesses’ switching costs by at least £340 million/year.</p>
<p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>In standard economic models, increasing the number of firms in a market is sufficient to increase competition. Waterson challenged the received wisdom that more firms automatically increase competition and make consumers better off, using existing studies to highlight how search and switching costs inhibit the competitive process, and demonstrating this effect in several industries. He identified how firms increase search costs – by obscuring information about prices and the whole cost of a contract – and impose prohibitive switching costs, and showed how these costs make it difficult for consumers to make efficient choices, regardless of the number of firms. Waterson argued that regulators should explore novel strategies to empower consumers and discipline firm behaviour to improve the functioning of markets.</p> <p>His first paper, Waterson (2003), showed how search and switching costs can keep prices high even with a large number of firms, and highlighted firms’ strategies to enhance these costs, from persuasive advertising to failing to list prices to the introduction of loyalty programs or bundling. He further demonstrated how differences in search or switching costs – in industries from insurance to banking to energy – could explain differences in firm profitability across these industries.</p> <p>Waterson subsequently demonstrated these effects in the newly deregulated UK gas and electricity markets. In Giulietti, Waddams, and Waterson (2005), he collected survey data to analyse consumer awareness of new entrants into the natural gas market and their willingness to switch suppliers. He found that consumer beliefs about the functioning of the market are important and that under realistic scenarios about search and switching behaviour, consumers would be no better off despite the increased competition. Giulietti, Otero, and Waterson (2010) analysed deregulated electricity prices and found significant variation in prices across incumbents and entrants over time consistent with large search and switching costs. They concluded that price and product information, and consumers’ willingness to exploit it are necessary for these markets to function adequately, and recommended regulatory policies ranging from making prices more transparent to changing the terms for continuing supply from the same provider.</p> <p>Professor Crawford demonstrated that switching costs are also an issue in telecommunications markets. The UK telecommunications regulator, Ofcom, became concerned when BT, the largest telecommunications provider in Britain, introduced and marketed heavily automatically renewable, or "rollover", contracts for residential and small business telephone and broadband internet service. In exchange for a discount on their service, these contracts imposed significant early termination charges on a recurring basis unless households acted in a short window at the end of each annual contract. Ofcom commissioned Professor Crawford to evaluate the impact of rollover contracts on household switching behaviour, controlling for the discount provided by the contracts and other potentially confounding factors (Crawford, Tosini, and Waehrer (2010a, 2010b)). This work was subsequently submitted for academic publication (Crawford, Tosini, and Waehrer (2011)).</p> <p>Crawford and his co-authors evaluated switching behaviour among a random sample of BT customers. They found, controlling for other factors that influence switching behaviour, that rollover</p>

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households switch after their first contract period 34.8% less than comparable customers on standard plans, inducing switching costs on the order of 33.0% of the monthly price of the average BT fixed-voice telephone service. This raised significant concerns about the competitive effects of such contracts in telecommunications markets.

### 3. References to the research (indicative maximum of six references)

#### The research:

1. Waterson, M., 2003, The role of consumers in competition and competition policy, *International Journal of Industrial Organization*, v21, 129-150, DOI: [http://dx.doi.org/10.1016/S0167-7187\(02\)00054-1](http://dx.doi.org/10.1016/S0167-7187(02)00054-1).
2. Giuliotti, M., Waddams Price, C., and Waterson, M., 2005, Consumer choice and competition policy: A study of UK energy markets, *Economic Journal*, v115, 949-968. DOI: <http://dx.doi.org/10.1111/j.1468-0297.2005.01026.x>.
3. Giuliotti, M., J. Otero, and M. Waterson, 2010, Pricing behaviour under competition in the UK electricity supply industry, *Oxford Economic Papers*, v62n3, 478-503. DOI: <http://dx.doi.org/10.1093/oep/gpp029>.
4. Crawford, Tosini, and Waehrer, 2010, Empirical analysis of BT's automatically renewable contracts, report prepared for Ofcom, August 2010. URL: [http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/annexes/Annex\\_07.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/annexes/Annex_07.pdf).
5. Crawford, Tosini, and Waehrer, 2010, Empirical analysis of BT's automatically renewable contracts, supplemental report prepared for Ofcom, February 2011. URL: [http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/annexes/Annex\\_8.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/annexes/Annex_8.pdf).
6. Crawford, Tosini, and Waehrer, 2011, The Impact of "Rollover" Contracts on Switching Costs in the UK Voice Market: Evidence from Disaggregate Customer Billing Data, CEPR Discussion Paper No. 8693, December 2011. Under revision for resubmission to the *Economic Journal*. URL: <http://go.warwick.ac.uk/gregorycrawford/research/2011.07.bt.switching.final.cepr.pdf>.

#### Evidence of research quality:

There are three academic papers and two sponsored research reports and an academic paper submission, the latter three of which are substantively related. The academic research papers are all published in excellent (3\* or 4\*) journals. The *IJO* is ranked 37<sup>th</sup> among economics journals in the Association of Business Schools (ABS) rankings, 47<sup>th</sup> in the Kalaitzidakis et. al. (2003, *JEEA*) rankings, and 62<sup>nd</sup> in the REPEC rankings. The *EJ* is ranked 13<sup>th</sup>, 18<sup>th</sup>, and 15<sup>th</sup> and *OEP* is ranked 52<sup>nd</sup>, 53<sup>rd</sup>, and 64<sup>th</sup> in the same rankings. While as yet unpublished, the academic submission listed above has received a revise and resubmit from the *EJ*, as above ranked 13<sup>th</sup>, 18<sup>th</sup>, and 15<sup>th</sup> in the ABS, *JEEA*, and REPEC rankings.

### 4. Details of the impact (indicative maximum 750 words)

Waterson's research and policy recommendations have been used by competition and sector regulators to reduce search and switching costs and promote competition, both of which benefit consumers. Dr Amelia Fletcher, Chief Economist at the Office of Fair Trading (OFT) from 2001-2013 noted, "Since 2001, the OFT has had a remit to carry out market studies where competition does not seem to be working well for consumers. As Chief Economist at the OFT [in] that time, I was involved in developing our framework and methodology for carrying out such studies. Waterson's work on search and switching costs ... was very influential in this... including recent studies into personal current accounts (2008-9) and consumer contracts (2011)" (Fletcher (2013)).

Under UK competition law, the OFT may refer a market to the Competition Commission (CC) for investigation. Robin Finer, Director of Economic Analysis at the CC, said "Waterson's work on consumer behaviour, particularly in relation to search and switching, has had an important impact in several of the CC's market investigations... Some important examples of investigations where we have identified substantial barriers to consumer search and/or switching are: store cards,

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domestic bulk liquid petroleum gas, home credit, personal current account banking services in Northern Ireland, and payment protection insurance...<sup>1</sup> In all of these cases, it was important to identify the relevant barriers to search and/or switching, to understand their impact on competition, and to identify suitable remedies to help customers overcome them. Professor Waterson's work contributed heavily to providing a sound theoretical basis for all of these steps in our analysis and in improving outcomes for consumers" (Finer (2013)).

Finer concluded, "The influence of Waterson's work on the CC's approach to market investigations can be seen from our recently updated guidelines for market investigations (April 2013), where we outline the potential importance of customer behaviour, particularly in terms of search and switching, in making competition work effectively, ... both in terms of our competitive assessment and our choice of remedies" (Finer (2013)).

The Government's centrepiece economic policy, 'Plan for Growth', also cites Giulietti, Otero, and Waterson (2010) in support of its statements about the importance of competition and that "markets rely heavily on active and informed consumers to drive competition" (BIS (2011, p12)).

Waterson's work has been prominently cited in government documents in Finland, Australia, the European Commission, and the World Bank. Former Australian Competition and Consumer Commission Deputy Chair, Louise Sylvan, concluded "Waterson's published work on the ways in which... consumers drive competition... were seminal to our initial thinking and the direction of our subsequent work both in the recommendations on superannuation regulation in Australia in 2010 and more globally through the... Economics of Consumer Policy work that I chaired... at the OECD [in 2010]" (Sylvan (2013)).

Professor Crawford's research directly impacted Ofcom's decision to ban rollover contracts. Ofcom concluded, "Our research, in particular the econometric analysis that we commissioned on the switching behaviour of BT customers [i.e. the Crawford research], indicates a clear causal link between ARCs and reduced levels of consumer switching. We believe ... that any example of such a contract is likely to be harmful to consumers and to effective competition" (Ofcom (2011, p1)). Based on these conclusions, Ofcom prohibited automatically renewable contracts in the fixed voice and fixed broadband small business and residential sectors from 31 December 2012 (ibid).

Dr Andrea Coscelli, Director of Economics at Ofcom, said of this process, "Professor Crawford and his colleagues were able to use sophisticated econometric analysis to separate out and identify the effects of rollover terms and showed that they did in fact materially inhibit [consumer] switching [behaviour]... We had wrestled with these issues prior to the involvement of Professor Crawford and without his input we would have found it difficult to make a robust case (both internally and externally) that [rollover] terms [in consumer contracts] were having an adverse effect... The impact of the work was enhanced by the clear presentation of the final results to key decision makers within Ofcom and this had a significant effect on our final decision" (Coscelli (2013b)).

Policymakers responsible for enhancing competition are direct beneficiaries of this research, but the reach and significance extend to consumers for whom a reduction in such costs provides tangible benefits. For example, reporting on the consequences of remedies introduced after the payment protection insurance investigation, the CC concluded, "the total consumer detriment to be addressed would be significantly more than £200m per year. The remedies package as a result incorporated significant information provision requirements to enhance search and switching. Implementation necessarily involved costs but the net benefit of the measures taken was evaluated as being substantially positive" (CC (2009)).

The estimated direct benefit to consumers of eliminating the switching costs induced by BT's rollover contracts was 33.5% of the price of telephone service, equal to at least £120 million/year (Crawford et. al. (2012)). Ofcom has banned or threatened to ban rollover contracts in residential

<sup>1</sup> These reports are from 2006, 2006, 2006, 2007, and 2009, respectively. The remedies imposed applied throughout the current impact period.

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and small business broadband services and mobile services (Ofcom (2011, p5)), which would extend the value of consumer benefits by an additional £220 million/year, for a total of £340 million/year.<sup>2</sup>

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

BIS, 2011, Better Choices, Better Deals: Consumers Powering Growth, pp 1, 12. URL:

<http://www.bis.gov.uk/assets/biscore/consumer-issues/docs/b/11-749-better-choices-better-deals-consumers-powering-growth.pdf>.

Competition Commission (2009), Market Investigation into Payment Protection Insurance. URL:

[http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep\\_pub/reports/2009/fulltext/542](http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/542)

Director of Economics, Ofcom, letter (re: Greg Crawford) to Professor Abhinay Muthoo, Head of Department, Department of Economics, University of Warwick, dated 20 March, 2013.

Director of Economics, Ofcom, letter (re: Mike Waterson) to Professor Abhinay Muthoo, Head of Department, Department of Economics, University of Warwick, dated 21 March, 2013.

Director of Economic Analysis, Competition Commission, email to Professor Michael Waterson, Department of Economics, University of Warwick, received 14 June, 2013.

Former Chief Economist, Office of Fair Trading, email to Professor Gregory Crawford, Director of Research Impact, Department of Economics, University of Warwick, received 14 June, 2013.

MarketLine (2012a), Industry Profile: Telecommunication Services in the United Kingdom, September 2012. Available from the Marketline database.

MarketLine (2012b), Industry Profile: Internet Access in the United Kingdom, September 2012. Available from the Marketline database.

Ofcom, 2010, Strategic review of consumer switching: A consultation on switching processes in the UK communications sector, pp 1, 2, 84. URL:

<http://stakeholders.ofcom.org.uk/binaries/consultations/consumer-switching/summary/switching.pdf>.

Ofcom, 2011a, Automatically Renewable Contracts: Research into their effects and proposals for a General Condition, p 1. URL:

<http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/summary/arcs.pdf>.

Ofcom, 2011b, Automatically Renewable Contracts: Decision on a General Condition to prohibit ARCs, pp 1, 2, 30. URL:

[http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/statement/ARCs\\_statement.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/arcs/statement/ARCs_statement.pdf).

Ofgem, 2008, Energy supply probe: Initial findings report, pp 1, 13-14. URL:

<http://www.ofgem.gov.uk/Markets/RetMkts/ensuppro/Documents1/Energy%20Supply%20Probe%20-%20Initial%20Findings%20Report.pdf>.

Former Deputy Chair of the Australian Competition Commission and former chair, Economics for Consumer Policy, OECD, Letter to Diana Egerton-Warburton, Research Impact Manager, Department of Economics, University of Warwick, received 25 January 2013.

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<sup>2</sup> Marketline (2012a, 2012b) estimates the fixed voice market constitutes 35% of the overall communications (fixed and mobile voice and broadband Internet access) market.