

<b>Institution: University College London</b>
<b>Unit of Assessment: 18 – Economics and Econometrics</b>
<b>Title of case study: Applied research leading to the regulation of drip pricing</b>
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>From the 1990s UCL Economics invested in the capacity to conduct fundamental and applied research in behavioural and experimental economics. This was the basis for the research which provided the evidence base for the Office of Fair Trading to identify and act upon misleading pricing practices, particularly ‘drip pricing’, in 2010. As a result, 12 major airlines announced that they would include debit card charges in their headline prices, and government announced that the EU-wide Consumer Rights Directive would be implemented a year earlier than it was due to go into effect.</p>
<p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>Experimental research on consumer decision-making builds on many years of academic and applied work carried out at UCL. In the late 1990s Ken Binmore (then Professor of Economics at UCL) started the dual strategy of conducting experiments for purely academic work as well as to inform real-world interventions at the Economic and Social Research Council-funded Economic Learning and Social Evolution (ELSE) centre, where often one informed the other. The most spectacular example of this was how auction theory and experiments carried out at UCL informed the design of the UK 3G auction in 2000, which raised an astonishing £22.5bn and triggered much subsequent research into the design and conduct of auctions [a].</p> <p>With Steffen Huck joining UCL in 2002, the Department began to build a larger group in experimental and behavioural economics. In the area of consumer decision-making, the group generated a wide array of high-quality research. For example, in 2005 researchers examined the effects of different forms of feedback information on the performance of markets that suffer from moral hazard problems due to sequential exchange, and found that two-sided market transparency is an important ingredient for the design of well-functioning markets that are prone to moral hazard [b]. Subsequent work estimated risk preferences using novel elicitation techniques [c], and explored the consequences of competition in the presence of behavioural biases [d]. These studies provided the academic foundation for capacity development in consumer policy questions.</p> <p>In parallel, the group developed the capacity for more applied work. For example, Huck and Brian Wallace developed experiments to inform Ofcom on issues such as price transparency of telephone calls or ease of switching telecom and internet providers. Huck also co-authored the first-ever behavioural/experimental study for the European Commission, an investigation into retail finance titled “Consumer decision making in retail financial services”.</p> <p>In 2009, the Office of Fair Trading (OFT) commissioned UCL researchers and London Economics to investigate various ways of ‘framing’ prices, and the impact on consumers. UCL’s Huck and Wallace designed and carried out the study, and did the data analysis and interpretation, while London Economics provided administrative support and contributed to the policy implications. The study investigates six different ways of “framing” prices:</p> <ol style="list-style-type: none"> <li>1. Standard upfront per-unit pricing (serving as a baseline);</li> <li>2. Drip pricing where the consumers see only part of the full price upfront and price increments are dripped through the buying process’</li> <li>3. Sales in which a sale price is given and a pre-sale price is also given as a reference to the consumer, ‘was £2 is now £1’ (actual prices are identical to the baseline treatment);</li> <li>4. Complex pricing where the unit price requires some computations, ‘3 for the price of 2’;</li> <li>5. Baiting in which sellers may promote a special price but there is only a limited number of goods actually available at that price;</li> </ol>

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6. Time-limited offers where the special price is only available for a pre-defined short period of time.

These frames were investigated in an experimental search market in the UCL experimental laboratory where 166 consumer subjects were endowed with a concave utility function and could buy multiple units of a good sold by two different sellers. There were search costs (travel costs) each time a consumer visited one of the two sellers. Each subject was confronted with the baseline and two of the other frames, and all possible combinations of frames were explored.

The research showed that all frames had adverse effects on consumer behaviour and welfare, but identified drip pricing as, by far, the worst offender, followed by time-limited offers and baiting. Drip pricing wiped out 25% of consumer surplus relative to the baseline with straight per unit prices shown upfront. The study also examined in close detail the question of the external validity of its laboratory results, demonstrating that, if anything, drip pricing would be an even bigger problem in real-world shopping. The study was published as a working paper [e] and written up for a policy audience in an OFT report.

In addition to Huck and Binmore, UCL researchers working in areas contributing to the consumer agenda included Syngjoo Choi (then Assistant Professor; now Associate Professor at UCL), Ran Spiegler (Professor at UCL since 2006) and Brian Wallace (Senior Research Fellow; at UCL since 2006).

**3. References to the research** (indicative maximum of five references)

[a] Binmore, K. and Klemperer, P. (2002) The biggest auction ever: The sale of the British 3G telecom licenses, *Economic Journal*, 112, C74–C96. DOI: [10.1111/1468-0297.00020](https://doi.org/10.1111/1468-0297.00020).

[b] Bohnet, I., Harmgart, H., Huck, S., and Tyran, J. R. (2005) Learning trust, *Journal of the European Economic Association*, 3, 322–329. DOI: [10.1162/jeea.2005.3.2-3.322](https://doi.org/10.1162/jeea.2005.3.2-3.322).

[c] Choi, S., Fisman, R., Gale, D., and Kariv, S. (2007) Consistency and heterogeneity of individual behaviour under uncertainty, *American Economic Review*, 97, 1921–1938. DOI: [10.1257/aer.97.5.1921](https://doi.org/10.1257/aer.97.5.1921).

[d] Spiegler, R. (2011) *Bounded Rationality and Industrial Organization*. Oxford University Press, New York. Submitted to REF2.

[e] Huck, S., Schmid, J. and Wallace, B. (2013) Price framing, *WZB Discussion Paper* SP II 2013-314. <http://bibliothek.wzb.eu/pdf/2013/ii13-314.pdf>.

An earlier version appeared as a policy-oriented report: Duke, C., Huck, S., and Wallace, B. (2010) The impact of price frames on consumer decision making, *OFT Research Report* 1226, [http://www.of.gov.uk/shared\\_of/economic\\_research/OFT1226.pdf](http://www.of.gov.uk/shared_of/economic_research/OFT1226.pdf)

The quality of research is demonstrated by publications [a]–[d] in top rated peer-reviewed leading general economics journals.

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

The OFT estimates that UK consumers spent £300 million on payment surcharges at the ten largest airlines during 2009 alone [1]. Upon receiving a super-complaint from *Which?* in March 2011, the OFT commissioned research into the advertising of prices, part of which was our experimental study as described in section 2. The experimental study [e] became the prime evidence for the OFT's new stance against drip pricing.

On 2 December 2010, OFT announced that it had identified, based on 'ground-breaking behavioural economics research' among other sources, that drip pricing, time-limited offers and baiting sales were pricing techniques with the potential to cause the greatest harm to consumers

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[2]. It warned that: “On drip pricing, for example, businesses that ensure all compulsory charges are included in the headline price, and make details of all genuinely optional charges available at the early stages of the buying process are less likely to be subject to OFT enforcement action.”

On 28 June 2011, the OFT took action on this finding, specifically in the travel sector where abuse was felt to be most rampant. It announced that it had put passenger travel companies “on notice to change misleading debit and credit card surcharging practices or face enforcement action under consumer protection laws” [3].

It further added: “Publishing its findings on these surcharges, following a super-complaint from *Which?*, the OFT also calls for the law to be updated to stop consumers being surcharged when buying goods and services with any debit card.”

As an immediate result, in July 2012, 12 major UK airlines (including Easyjet and Ryanair) announced that they would include debit card charges in their headline prices [4]. Thus, for instance, Ryanair announced that its £6 per flight administrative fee would be included in advertised prices by August 2012, and in the website headline price by December. The popularity of this move may be gauged by the fact that the news article regarding this on the BBC website received 371 comments in a single day, the content of which demonstrated the extreme frustration drip pricing had caused consumers [4].

At this time, the EU Consumer Rights Directive, which would ban businesses in many sectors, including the airline sector, from imposing above-cost surcharges on any form of payment, was due to be implemented from mid-2014. In December 2011, however, the UK government announced its intention of becoming the first European country to ban this practice by bringing forward its legislation. It cited the OFT recommendations based on research as underpinning this decision [5].

In September–October 2012, the Department for Business, Innovation and Skills (BIS) held a consultation on bringing the ban forward. This was formally published on 18 January 2013 [6]. Meanwhile, on 18 December 2012, the Consumer Rights (Payment Surcharges) Regulations 2012 was laid before Parliament, and came into force from 6 April 2013 [7].

The research and its wide coverage in the press [e.g. 8] also contributed to public debate on drip pricing and contributed important evidence to general public dissatisfaction with the practice. As suggested by the number of comments on the BBC news item described above, as well as the 439 comments received at the government announcement of December 2011, the ban was immensely popular amongst UK consumers [9].

The UCL research has begun to influence regulation in other countries, notably in the United States, where the Federal Trade Commission (FTC) held a conference on drip pricing in 2012 where the OFT’s chief economist, Amelia Fletcher, presented the work [10]. As a result, in November 2012, the FTC issued a warning to 22 hotel operators to stop drip pricing in the United States [11].

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

[1] OFT Q&A about the surcharges super-complaint:

<http://www.of.gov.uk/OFTwork/markets-work/super-complaints/surcharges-qandas#.Uh8ltht7lqQ>

[2] OFT press release about advertising of prices study 2/10/2010:

<http://www.of.gov.uk/news-and-updates/press/2010/124-10#.Uh8m7xt7lqQ>

[3] OFT press release about taking action in the travel sector 28/06/2011:

<http://www.of.gov.uk/news-and-updates/press/2011/76-11#.UUruu2ewegg>

[4] BBC news report about airlines including credit card surcharges in their headline prices

5/7/2012:

<http://www.bbc.co.uk/news/business-18718556>

[5] HM Treasury press release about bringing forward legislation to tackle excessive card surcharges 23/12/11:

<https://www.gov.uk/government/news/government-to-bring-forward-legislation-to-tackle-excessive-card-surcharges>

[6] Consultation on the early implementation of a ban on above cost payment surcharges (2/9/2012–15/10/12): <https://www.gov.uk/government/consultations/consultation-on-the-early-implementation-of-a-ban-on-above-cost-payment-surcharges>

[7] The Consumer Rights (Payment Surcharges) Regulations 2012:

<http://www.legislation.gov.uk/uksi/2012/3110/made>

[8] *The Economist*, 27/05/2010, article about the OFT study focussing on the experimental component:

<http://www.economist.com/node/16216606>

*Financial Times* 21/08/2010, article about the OFT study focussing on experimental component:

<http://www.ft.com/cms/s/2/71796594-a9a4-11df-a6f2-00144feabdc0.html#axzz2OAmAKG6>

[9] BBC news report on new legislation banning excessive card charges with over 400 comments by readers (23/12/2011):

<http://www.bbc.co.uk/news/business-16301923>

[10] FTC website about drip pricing conference held on 21/5/2012:

<http://www.ftc.gov/be/workshops/drippricing/index.shtml>

[11] FTC website about their warning to hotels and resorts, published 28/11/2012:

<http://ftc.gov/opa/2012/11/hotelresort.shtm>