

Martin Cave: Energy Prices

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“Distributional and competition aspects of energy pricing:
a memorial lecture for Gill Owen”

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Why worry about energy prices?

- the essential nature of the service means that all consumers are required to purchase it
- it is a major component of household expenditure
- it accounts for a larger proportion of expenditure of poorer than of richer households
- it accounts for a higher than average proportion of expenditure of vulnerable households
- The recent overall estimate of the detriment imposed on GB consumers by suppliers is large in absolute terms

This presentation will focus first on distributional questions and then on competition questions in energy pricing.

Approaching the distributional question via utilitarianism, or Bentham with maths

- The utilitarian approach: the greatest good for the greatest number, or
- Social welfare = A's utility + B's utility + C's utility, each dependent on income
- Suppose marginal utility declines with income
- [How do we know it does?]
- [How fast does it decline (answer: a 10% increase in income lowers marginal utility by 10%]
- Then there may then be a case for cross-subsidising the energy bills of those with low incomes via higher charges for other customers (if broader routes to redistribution are not available)

Inequality in utility: the utility monster issue

- Suppose some people are better at getting utility out of spending money; these people would get lots of income and utility.
- We may think this unfair and build into our social welfare function a degree of inequality aversion, pioneered by Tony Atkinson.
- **Does anybody think in this way?**
 - Widely used in development economics manuals in the 1970s/80s
 - Outlined in HMT's Green Book (apparently without any inequality aversion)
 - Used to evaluate the impact of the Warm Homes Discount Scheme

Warm Homes Discount Scheme Welfare Weights

(Using these weights, the scheme came out positive)

Household decile:		Welfare weight:
<i>Lowest</i>	1	3.6
	2	2.0
	3	1.5
	4	1.3
	5	1.1
	6	0.9
	7	0.8
	8	0.7
	9	0.5
<i>Highest</i>	10	0.4

Is this ambitious approach widely used in practice?

- Although the assessment of the WHD scheme applies welfare weights, there is no optimisation. The scheme is politically driven: the early socialists' vision of plenty in which 'the government of men has given way to the administration of things' has not materialised
- What underlies most vulnerable customer schemes is a focus on giving (small and somewhat disorganised - see below) help to the worst off at everyone else's expense; this may be flatteringly be described as a very distant relation of John Rawls' difference principle, which focuses on the effect of a policy measure solely on the position of those who are be worst off.
- Who pays and who fixes it? Regulators prefer tax funding, governments cross-subsidy. Regulators normally lose, and have to fix up the schemes using varying and sometimes ambiguous powers

How is this working out in practice in the UK: the NAO report on vulnerable customers

- 29 million GB households
- 8 million over-indebted
- 7% of those contacting Citizens' Advice experience problems paying their debts in at least 3 of energy, telephony, water and credit
- Disconnections in energy and water very low, but 1.8 million energy pre-pay customers self-disconnect per year
- Extent of customers on social tariffs:
 - Water: 260,000 households
 - Telephony: 350,000 households
 - Energy: 2,200,000 households

The NAO notes:

- Discounts such as social tariffs are inconsistent across firms and sectors
- Improving consumer information is only partially effective (see also below)
- Regulatory incentives to promote service for vulnerable customers are only partially effective
- There are no comprehensive cross-sectoral data on customers' experience
- The regulators do not understand firms costs in supporting vulnerable customers

Need for much greater clarity about means and ends, more regulatory co-operation and better monitoring

Next and final section

- How innovation and smart meters can help vulnerable customers, and all customers
- Responses to our general competitive discontents

The role of innovation/smart meters in protecting vulnerable customers

- The focus of a lot of Gill Owen's (and Sustainability First's) work is on the impact of smart technologies generally on disadvantaged customers
- This continued with in Australia with Gill's work at Monash University which discussed load shifting and the risks disadvantaged customers might run with time-of-day tariffs – given the high concessions of 30-44% of bills available to certain customers in parts of Australia
- This is a very valuable strand of work, still continuing strongly at Sustainability First – see the 'Inspired' project.

But,

- The degree to which it succeeds might plausibly upon the automation of the steps required or their delegation to others organisations, which might include suppliers, tech companies or others (cf. Google's project Fi)
- Will smart meters make much difference? Up to 2016, some evidence was available on the impact of smart meters on load switching by households, but lacking on supplier switching
- One's view of the implications of this may also depend upon the timing of smart meter introduction (and the capacities of the meters)

Household energy markets in GB in the (mostly) pre-smart era

- The CMA Energy Market Investigation final report (June 2016) concluded that certain suppliers of energy to households exercised unilateral market power as a result of weak domestic customer response
- The Authority observed a ‘two-tier’ market in which about 70% of households were on an evergreen Standard Variable tariff while the remainder were on fixed period tariffs, the difference between the two amounting to as much as 30-35% of a fixed period tariff. The Authority estimated the detriment to households, based on a comparison of actual and competitive prices, at £1.4 billion per annum over the period 2012-2015, and rising sharply between the two dates.

Switching rates are disproportionately low in GB for the following categories:

- age 55+ years
- income < £18k
- educational qualifications GCSE or below
- those residing other than in mortgaged accommodation
- the disabled
- residents of Wales and Scotland
- rural residents.

Household remedies include

- Demand-side remedies
- Price caps

Both have disadvantages

Another approach, worth more exploration, is

- ‘Opt-out’ mass switches

The degree of predictability of demand side measures

- It is desirable in evaluating remedies if a measure of success can be established their impact can be forecast
- And if a forecast of their outcome (possibly within a range) can be established
- These are not normally a feature of demand-side remedies
- A set of reasons for this may be found in a recent review of their effects

Prof Fletcher's review of the use of demand-side remedies in the UK*

- A recent UK study* has reviewed the effectiveness of demand-side measures used by regulators and competition authorities in the UK, under three headings:
 - disclosure remedies: 'a number of positive outcomes are observed. However, there are also a number of instances in which disclosure remedies were less effective than expected, or even ineffective. Examples are also provided in which disclosure remedies seem to have had a detrimental effect on consumer decision-making'
 - shopping around remedies: the same conclusion as above
 - switching remedies: they too exhibit some successes, but there 'is also evidence of switching remedies that have been less effective , or even ineffective, reflecting the fact that it can sometimes be hard to enhance switching behaviour'

*Amelia Fletcher, *The Role of Demand-Side Effects in Driving Effective Competition*, a Review for Which? November 2016

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- Professor Fletcher also noted that the most observations relate measures to adopted in the earlier ‘pre-behavioural’ period.
- She also noted that firms may seek to neutralise the measures
- She concluded: “Getting such remedies right is difficult. We can sometimes predict how consumers will act on the basis of past experience, but often we cannot.”
- In these circumstances, testing of remedies looks essential. But it may take a long time (eg. the ‘database remedy’) or the search may even be fruitless or yield very limited results

The problems with price caps

- May stifle competition
- May enhance customer disengagement, by lowering prices and affecting perceptions
- May reduce innovation
- May reduce long-term incentives for efficiency
- May lead to collusion
- May raise prices elsewhere (waterbed effect)
- But the instantaneous effect is reliable
- And the short term effect on productive efficiency is probably positive

Can a cap be designed to avoid or mitigate these problems?

Does a price cap kill competition for ever?

- Clearly it can, but this depends on:
 - its duration
 - whether it is expected to end
 - the degree of headroom in the cap
 - the ease with which it can be renewed
 - etc.
- Retail safeguards caps have been withdrawn in the past, for example in Australia and the UK, in energy, telecoms and elsewhere
- Much depends on the design of the cap
- A balance has to be struck between this risk and the scale and likely duration of consumer detriment from over-charging

A possible cap design

“8. My proposed wider price cap remedy attempts to achieve this goal of interim protection and promotion of engagement. Thus:

- it reliably resets the charges paid by about 16 million SVT households, removing a significant part of the 2015 detriment of £2 billion, whereas the prepay meter cap addresses only one fifth of it;
- a safe-guard (above-cost) element enables the designer of the cap to be confident in achieving a desired level of detriment reduction, but also allows variation in the intrusiveness of the cap, and permits its level to be set to provide appropriate incentives to switch to a cheaper tariff;
- the short duration of the cap (two years or so) reduces the risk that it will become unworkable as a result of unforeseen events;
- its non-renewable nature ensures that a separate regulatory or legislative process has to be agreed and implemented for it to be extended in time;

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- it puts cost pressure on the larger suppliers to become more efficient;
- its protective power should outlast the cap, as customer resistance and other factors will prevent energy companies from immediately re-establishing the same level of over-charging as before;
- it protects vulnerable customers; it defaults after two years to reliance on the other remedies, which by that time may emerge from their ‘untried and untested’ status and have a better chance of success.”

The tailpiece: “9. *If after an interval competition fails to develop on this platform, then new legislation or regulation should be introduced to drive out excessive retail pricing on a more permanent basis.*”

Conclusion

- The economic and social importance of retail energy pricing is large
- Distributional questions are rising up the agenda, following the NAO report
- As we enter the fourth year after the start of the CMA investigation, there has been no apparent closure of the competition issues
- Where next?