

Three years after the CUPI report: An economist's perspective on the pricing of PSI

The CLG recently consulted on OS pricing policy and noted three options: retail minus pricing, marginal cost pricing and Ramsey Pricing. This presentation looks at some of the literature informing this, including the CUPI and Cambridge Studies.

Pricing public sector information: Overview

- Stylised facts about the nature of the problem
- Analytical approaches: Information Rules, CUIPI and Cambridge
- Pricing options
- Concluding comments

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Stylised facts: PSI and CUPI

What makes PSI different?

Cost structure

- First use of PSI expensive;
- ... second cheap
- Feature of other industries

Intellectual property

- Cost structure reflects IPR
- Maximise value of the IP
- ... as well as protect rights

Experience good

- User informed after use
- Need to convey information quality
- Leads to branding, trials etc

Economics of Attention

- Easy to create website
- Information overload
- Personalisation higher

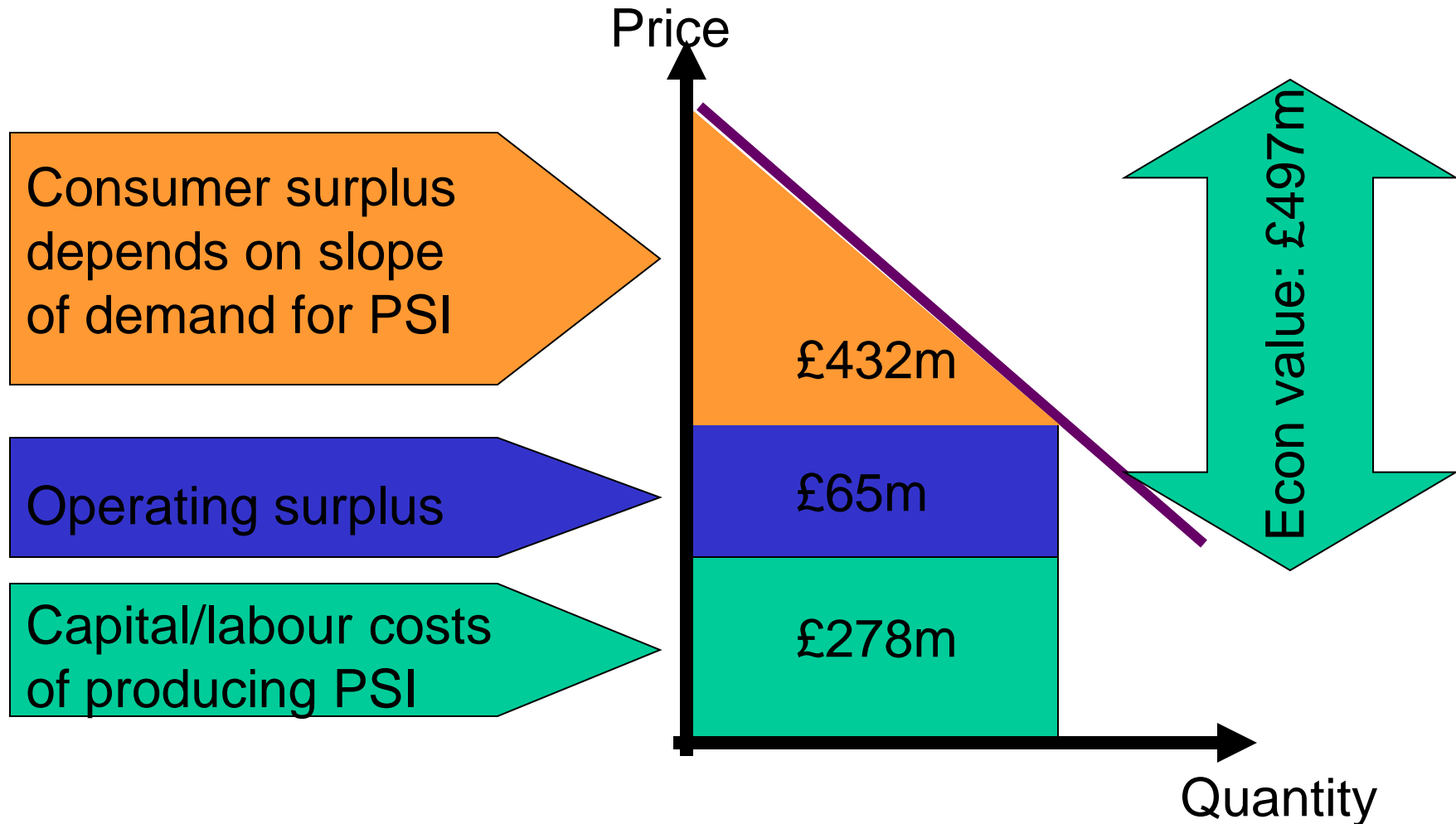
High value to economy of PSI using industries

- Top-down valuations
 - **Costs of production:** Approach gives a lower bounds based on costs of PSI provides
 - **Value added by PSI users:** Upper bound as large portion of economy uses PSI Value added by PSI users
 - Examples: Oxera for OS: OS products and services used in 12-20% of UK gross value added or £79-136bn; British Geographical Society: 8% to mapping
- Potential value of PSI by adding:
 - User's preparedness to pay for PSI over and above any costs
 - Sales revenues of PSI through commercialisation less costs of provision

Estimating economic value

- Commercial Use of Public Information study for OFT
- Careful look at different strata of the industry
 - Stratum 1 covers 86% of value and includes Met Office, Ordnance Survey, Land Registry
 - Two further strata covers Departments own PSI and smaller public sector organisations
- Economic value approach for PSI
 - More sophisticated approach based on OFT survey of approx 500 PSI providers
 - Current economic value estimated at £590m
 - Potential value, removing detriments to full use of PSI, value of £1,110m

PSI economic value: Stratum 1



‘Information Rules’ by Shapiro and Varian

- Economics for developing strategies for information/network economy
- ... but not focussed on public sector PSI
- Details pricing and non-pricing strategies used to maximise profits
- Observation: information products not sold at posted price on a store shelf!

Strategies available

<i>Strategy</i>	<i>What it might be</i>
Pricing	Personalised or group
Versioning	Offer products so users choose
Rights Management	Raising value of rights
Lock-in	Switching costs
Network feedbacks	User value depends on how many use
Standards (War)	Co-operative or aggressively price

Stylised facts

- Public sector information high value
- Revenues are high, but so are costs
- Attributing revenue/costs to PSI important
- Dynamic, innovative information industry with some complex pricing strategies

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Ramsey, marginal cost and retail
minus pricing

Pricing options

- Marginal cost pricing
 - Set prices to meet short-run marginal costs
 - Set prices to meet long-run marginal costs
- Ramsey pricing
 - Differentiate pricing by purchaser groups
 - Seek to cover fixed and marginal costs
- Retail minus pricing – akin to information rules
- Welfare economics supports marginal cost pricing
 - Considerable analysis of the caveats around this, e.g. externalities
 - And – under plausible conditions – average cost pricing optimal
 - Result: who funds the database?

Cambridge study

- Careful look at the welfare economics of public sector economics
- Models the what ifs: welfare gains if pricing were nearer optimal
- ... But needs a lot of data and assumptions
 - Results sensitive to assumptions
 - General desire for more research
 - Difficulties of measuring when change is rapid
- Reproduction of information is cheap so near zero short run marginal cost
- Are marginal cost prices too low?
 - Any fixed costs will not be covered
 - Is there an argument for public subsidy?
 - [Externalities; social/distributional impacts; public good]

Cambridge Study: Long-run marginal cost pricing

- Define costs inclusive of development costs associated with a vintage of information
- Pollock describes three PSI funders:
 - Government
 - Updaters, who motivate changes to the database
 - Users
- Looks at conditions where each might pay fixed costs:
 - Fairly homogenous PSI user base with high demand elasticity should not fund
 - Government and updaters more likely
- Comment: Unpack the term ‘updater’

Innovation, product change and development costs

- Kurzweil's voice recognition software products
- Retail prices vary according to user
- Vocabulary database larger for each product and software more complex
- But recognition of 'high end' products
 - Higher quality of service
 - Technology demanding
 - Database innovation?
- Incentives to update

Product	Price	Description
Voicepad	\$79	20k vocab
Personal	295	30k vocab
Professional	595	50k vocab
Office talk	795	General
Law Talk	1195	Legal vocab
Voice Med	6000	Medical vocab
Voice Ortho	8000	Special medical

... but do you get to Ramsey pricing?

- Marginal cost pricing needs to be paralleled by suitable funding models
- Many PSI's have low 'update' costs as part of administrative systems
- ... but some do not
- Are updates user driven, or segments of businesses reselling to users?
- Are these segments willing to pay and/or making profits?

Concluding comments

- Public subsidy can be justified, with considerable subsidy already in place
- Some users need low cost/free access
- Preparedness to pay has a part:
 - Primarily funding maintenance
 - (Innovation, linking with key users, etc.)
- Information industry has strategies that offer some insights into how to do this