Consumers’ WTP for QoS in Post

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Gregory Swinand and Siôn Jones

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Overview

- Introduction
- Review of research
- Models and methods
- Data
- Results
- Conclusions
Introduction

- Previous studies (Swinand 2004) have looked at the provision of additional QoS in post from the production side
- Quality of service both a ‘production’ and ‘demand’
- An Post and Irish regulator (ComReg) have recently consulted on the costs and benefits of additional QoS for standard mail in Ireland
- An Post therefore asked LE to look at both consumer side and production side of QoS equation
- This study looks at consumers’ WTP for QoS
### Table 2.1.3: Valuation for Changes in Advertised Day of Mail Delivery (pence).

<table>
<thead>
<tr>
<th>Advertised delivery day</th>
<th>First Class</th>
<th>Mailsort 1</th>
<th>Financial Mailsort 1</th>
<th>Second Class</th>
<th>Mailsort 2</th>
<th>Financial Mailsort 2</th>
<th>Response Services</th>
<th>Mailsort 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 2</td>
<td>-6.8</td>
<td>-4.0</td>
<td>-7.3</td>
<td>5.6</td>
<td>1.9</td>
<td>3.6</td>
<td></td>
<td>8.9</td>
</tr>
<tr>
<td>Day 3</td>
<td></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
<td>0.0</td>
</tr>
<tr>
<td>Day 4</td>
<td></td>
<td>-5.6</td>
<td>-1.9</td>
<td>-3.6</td>
<td>-8.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 5</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Day 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Day 7</td>
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<td></td>
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<td>0.0</td>
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<tr>
<td>Day 8</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.9</td>
</tr>
</tbody>
</table>

*Source: PostWatch*
Models and methods

- Econometric approach – estimate demand as a function of several variables
- Postal demand can take price as ‘exogenous’
- Equation 1: \[
\ln Q = \sum_{i} a_i + b_1 \ln P + b_2 \ln w + b_3 \ln I + b_4 \ln qs + e
\]
- Equation 2: \[
\ln P = \frac{1}{b_1} \ln Q - \sum_{i} \frac{a_i}{b_1} - \frac{b_2}{b_1} \ln w - \frac{b_3}{b_1} \ln I - \frac{b_4}{b_1} \ln qs + e
\]
Models and methods

- Graphical intuition
Models and methods

- Graphical intuition
Data

Data presented a problem: An Post only offer a single class service

• How to get variation by prices, quantities and QoS?
• Postal prices, quantities and QoS do not vary much over time

Data solution

• Use international outbound domestic data: 1999-2003
• Used UNEX and UPU and An Post data on QoS
• QoS levels differ by country and time and by product, weight, etc
• Psuedo-‘panel’ (countryxtime) with 3626 observations
Data

- Scatter of the data

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**vol_country**

0 2000000 4000000 6000000

**TARIFFs**

0 5 10 15
Results

- Quality variable (lnavg_m_std) significant and expected sign
- Variables on price, income, wgt, significant and expected sign

Table 5.1: Regression results: Model 3.6

R² = 48%

| lnvolco | Coef. | Std. Err. | t   | P>|t| | [95% Conf. Interval] |
|---------|-------|-----------|-----|-----|----------------------|
| dflat   | -     | 0.54      | 0.11| -   | 4.97                 | -0.32               |
| dlet    | -     | 1.82      | 0.15| -   | 12.12                | -1.52               |
| dqual   | -     | 7.69      | 0.22| -   | 34.24                | 8.14                |
| lnprice | -     | 3.79      | 0.17| -   | 22.72                | 3.46                |
| lnwgt   | -     | 2.56      | 0.12| -   | 21.66                | 2.79                |
| lninc   | -     | 4.01      | 0.54| -   | 7.45                 | 5.07                |
| lnavg_m_std  | -   | 3.57      | 0.25| -   | 14.20                | 3.08                |
| _cons   | -     | 52.27     | 6.33| -   | 8.26                 | 39.85               |

Source: LE
Conclusions

- Econometric approach to valuing quality of service successful
- Consumers’ willing to pay small amounts to increase QoS by about 20%
  - Models estimated showed significant impacts and expected signs
  - Results corroborate previous research and more qualitative-style standard market research
- Future research could focus on combining production and consumer evidence
  - Is +QoS from regulatory or commercial viewpoint?