Heathrow, Gatwick and Stansted

Airports’ Price Caps, 2003-2008:

CAA recommendations to the

Competition Commission

February 2002

ANNEX

Heathrow demand valuation survey
Heathrow demand valuation survey

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Background and objectives

1.1 The contingent valuation (CV) method is a survey technique that has been used to elicit peoples’ preferences by asking them directly to report their willingness to pay (WTP) to obtain a specified good or service, or willingness to accept (WTA) to give up a good or service, rather than inferring these values from observed behaviours in regular market places. It is called “contingent” valuation because it uses information on how people say they would behave given certain hypothetical situations.

1.2 CV method has been widely applied to valuing public goods and environmental resources where markets for such goods or services do not exist or their transactions are not easily observable. Although CV method has its basis in economic theory (see for example Cameron and Carson, 1989) its use is subject to some controversy. Critics of CV allege that the quality of stated preference data is inferior to that obtained by observing revealed preferences, since people are asked to evaluate goods and services they have never purchased or never thought of purchasing. Despite these criticisms, CV has gained institutional acceptance and has formed the basis for policymaking in the United States (see Cropper and Alberini, 1998, for examples) and more recently in Europe.

1.3 The CAA has conducted a contingent valuation survey at Heathrow airport intended to provide evidence on the valuation that terminating passengers put on Heathrow relative to other airports in the South East, namely Gatwick, Luton

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3 Terminating passengers at Heathrow are passengers who begin their air journey at the airport. They may end their air journey at the destination of their current flight but some passengers will connect onto other services. Thus, passengers who appear to be travelling to a short-haul destination such as Amsterdam may in reality be travelling onto a long haul point such as New York.
and Stansted. The objective of the survey was to estimate the proportion of Heathrow’s terminating users who consider that airport as their first choice, and the compensation that they would require in order to fly from the less preferred airports in the South East.

1.4 The survey was carried out by personal interview at Heathrow between December 2001 and February 2002. In order to minimise the scope for sampling and aggregation biases, the main survey was preceded by several pilot surveys which helped in the design and testing of the clarity and consistency of the final questionnaire, training interviewers and obtaining estimates of the response rate and population variance needed to determine the appropriate sample size.

**Questionnaire design and survey implementation**

1.5 The initial questionnaire that was tested asked passengers to rank all four airports according to their preferences and to state their willingness to accept monetary compensation in order to fly from the three less preferred airports. During the pre-test procedure this design was found to be too complicated given available time and informational constraints on the part of respondents. It also resulted in an unacceptably high degree of variation in responses.

1.6 The survey questionnaire was simplified in order to minimise passenger inconvenience and reduce the information requirement. It was also decided to use passenger fare as the payment vehicle in order to facilitate the respondents’ valuation process by offering a more realistic context in which to value airport services. The final version of the questionnaire used in this study is shown at the end of this Annex.

1.7 Contingent on a hypothetical scenario, which assumed that the same flight was available for the same price at Heathrow, Gatwick, Stansted and Luton airports, each surveyed passenger was asked for his or her airport of first and second choice, keeping in mind that frequency of flights, ease of access or airport facilities may differ for the airports in question. This was followed by asking passengers how much cheaper their ticket would have to be in order for them to fly from the airport of second choice – a proxy for their willingness to accept (WTA) – in order to compensate the loss of benefits from using the less preferred airport.

1.8 A test for consistency of valuation responses was incorporated at the end of the questionnaire. In particular, the same WTA question was asked once again but with the previous open-ended format now replaced by the payment card listing plausible ranges of WTA value. Where the two responses were inconsistent, the stated WTA was excluded from further analysis.
1.9 In order to complete the profile of passengers and to assess the credibility of their responses, data such as purpose of flight, geographical market, UK origin/destination, country of residence and income level were also collected.

Sample composition

1.10 The sample size was set so as to achieve a two-sided 95% confidence interval while allowing for 15% - 20% possible deviation of the estimated WTA from the true WTA. Of the 743 passengers interviewed, 529 (71%) indicated Heathrow to be their most preferred airport (a similar percentage of passengers was found to prefer Heathrow in the pilot surveys). Of the 529 passengers preferring Heathrow, 75 (14%) did not respond to the WTA question, 43 (8%) provided an inconsistent response and 69 (13%) indicated that they would not be willing to accept compensation in the form of a fare reduction in order to fly from another South East airport. This resulted in 342 usable responses, which was 65% of the respondents who indicated Heathrow as their most preferred airport. However, no systematic difference was found between those who did and those who did not respond so as to merit some form of correction procedure.

1.11 Eighty four percent of the respondents had origin/destination in the South East. This is almost identical with the 85% of the target population travelling to or from points in the South East according to 2001 CAA Passenger Survey. Table 1 compares the composition of WTA respondents with that of the target population according to passenger purpose and market.

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4 These are within the acceptable levels of statistical confidence and precision in contingent valuation studies.

5 In CV surveys, non-response rates of between 20 – 40 percent are not uncommon.

6 The results from 2001 CAA Survey are provisional.
Table 1: Composition of terminating passengers

<table>
<thead>
<tr>
<th>Passenger Category</th>
<th>WTA valuation respondents</th>
<th>CAA 2001 Passenger Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Business</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Domestic Leisure</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Short Haul Business</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td>Short Haul Leisure</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Long Haul Business</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>Long Haul Leisure</td>
<td>31%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Note: Totals may not add up to 100% due to rounding.

1.1 By and large the distribution of the sample data is representative of the target population although some discrepancies between the sample of WTA respondents and the target population can be observed in the case of domestic leisure and short haul business passengers. This minor variation has been taken into account in computing the overall average WTA in the analysis.

Survey results

1.2 The willingness to accept results are summarised in Figure 1, which plots one minus the cumulative distribution function of willingness to accept responses:
1.3 It can be seen that some 12% of the respondents preferring Heathrow would be willing to use the second choice airport without requiring fare reduction. Although considerable care was taken by the interviewers to ensure that these answers are “genuine” zeros, it is possible that some are in fact “protest” responses. In order to guard against this possibility and to mitigate the effect of any gross outliers from the other side of the distribution, a 5% trimmed mean was used to compute the simple average willingness to accept for the sample. As expected, a significant variation in willingness to accept was found between different passenger categories. This can be seen from Table 2 below:
Table 2: WTA for various passenger categories

<table>
<thead>
<tr>
<th>Market</th>
<th>Purpose</th>
<th>5% Trimmed Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>Business</td>
<td>£56*</td>
</tr>
<tr>
<td></td>
<td>Leisure</td>
<td>£38</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>£43</td>
</tr>
<tr>
<td>Short Haul</td>
<td>Business</td>
<td>£61</td>
</tr>
<tr>
<td></td>
<td>Leisure</td>
<td>£35</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>£45</td>
</tr>
<tr>
<td>Long Haul</td>
<td>Business</td>
<td>£126</td>
</tr>
<tr>
<td></td>
<td>Leisure</td>
<td>£59</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>£69</td>
</tr>
<tr>
<td>Total</td>
<td>Business</td>
<td>£70</td>
</tr>
<tr>
<td></td>
<td>Leisure</td>
<td>£45</td>
</tr>
</tbody>
</table>

* Untrimmed mean based on 16 observations.

1.4 Given the slight discrepancy in composition of the sample and of the target population, as shown in Table 1, the over- and under-represented groups are weighted to adjust for their over- and under-representation when computing the overall average WTA for the terminating passengers at Heathrow who prefer that airport. This adjusted weighted average was found to be around £61.

1.5 This figure may be considered as a conservative estimate since the sample has excluded those who indicated that no amount of compensation would persuade them to fly from airports other than Heathrow. Subject to the usual caveats that apply to contingent valuation studies, this survey affirmed the relatively high premium of Heathrow over the other three airports in the South East, with business passengers valuing Heathrow more than leisure passengers and those on long haul flights having a stronger preference for Heathrow than either domestic or short haul passengers.
I am carrying out a survey for the Civil Aviation Authority to help understand how passengers value different London Airports, for example the frequency of flights, ease of access and airport facilities.

Q1 In which country have you been living for most of the last 12 months?

Q2 Which airport are you travelling to on the flight you are now boarding?

Q3 What is your flight number?

Q4 What is the purpose of your current journey? (Paid for own ticket?)

<table>
<thead>
<tr>
<th>Business</th>
<th>Non Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Q5 In the UK where did you start your journey to catch this flight?

Q6 Was it your decision to fly from this airport today?

If no go to Q8

SHOWCARD 1 - if Yes at Q6

Q7 Using the rating card, could you indicate how important the following factors were in your decision to fly from this airport today?

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Important</th>
<th>Fairly Important</th>
<th>Not very important</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

The location of the airport and other airport specific features

The price of the airline ticket

The availability of a specific flight

Other reasons (write in)........................................................................................................................................
To all passengers - please read

The next section of the questionnaire asks you to consider the hypothetical case where the same airline service is available from all London Airports.

Q8 Assuming that the same flight was available, for the same price, at Heathrow, Gatwick, Stansted and Luton Airport, but keeping in mind that you may not have the same frequency of flights, ease of access or airport facilities at all of these airports. Which would be your...

1st Choice                             2nd Choice

Passengers whose 1st choice is current airport go to Q9 or Q10 (not both)
Passengers whose 1st choice is not current airport go to Q12

Q9 How much cheaper would your ticket have to be, to fly return, from (2nd choice airport) to (airport in Q2)? - [If passenger in group please ask per passenger]

Airport                                Cheaper

[Passengers who do not respond to Q9 or give an answer of 9999 go to Q11 otherwise go to Q14]

Passengers who give no 2nd choice go to Q10
Q10 If a return ticket for the same flight from an alternative London airport to (airport in Q2) was cheaper than from here. - [If passenger in group please ask per passenger]

Which London airport would you choose?

How much cheaper would it have to be?

[Passengers who do not respond to Q10 or give an answer of 9999 go to Q11 otherwise go to Q14]
**SHOWCARD 2**

Q11 **Please indicate which statement on the card best describes** - why you have not responded to the previous question (Q9 or Q10)? or **the reason for your previous answer (Q9 or Q10)?**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Insufficient information to answer the question e.g. location of the other London airports, different travelling costs.</td>
</tr>
<tr>
<td>2</td>
<td>Value 1st choice airport so highly that no amount of money would persuade me to use another airport.</td>
</tr>
<tr>
<td>3</td>
<td>Do not like hypothetical questions.</td>
</tr>
<tr>
<td>4</td>
<td>Do not understand the questions.</td>
</tr>
<tr>
<td>5</td>
<td>Do not agree with the concept of the proposal</td>
</tr>
<tr>
<td>6</td>
<td>Do not have a favourite London Airport</td>
</tr>
<tr>
<td>7</td>
<td>Other reason (write in…………………………………………………………………………….)</td>
</tr>
</tbody>
</table>

*If a 2nd choice airport has not been given, end interview here*

*If a response of 9999 was given at any of the amount boxes, end interview here*

All others go to Q14
**Passengers who prefer another London airport**

*Still considering that the same flight is available at all the London airports… [as in Q 8]*

Q12 How **much extra money** would you be willing to pay in order to fly return from your preferred airport to *(airport Q2)*?

<table>
<thead>
<tr>
<th>Airport</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Passengers who do not respond to Q12 go to Q13 otherwise go to Q14]
SHOWCARD 3

Q13 Please indicate which statement on the card best describes why you have not responded to the previous question (Q12)?

1.6 Insufficient information to answer the question e.g. location of the other London airports, different travelling costs involved.

Do not like hypothetical questions

Do not understand the questions

Do not agree with the concept of the proposal

Do not have a favourite London Airport

Other reason (write in…………………………………………………………………………………………………)

Go to Q14

All passengers except IT

Q14 How much did you pay for your ticket including tax?

Cost Currency Single Return

15
Q15 Can you indicate from this card the total ANNUAL income of your household BEFORE tax and other deductions?
PASSENGERS WHO PREFER THIS AIRPORT - SHOWCARD 5

And finally assuming that the same airline service is available at all the London airports… [as in Q8]

Q16 Since you have indicated that you prefer this airport to (2nd choice), how much cheaper would your ticket have to be to fly return from (2nd choice airport) to (airport Q2)?

Record showcard band in box

[If Q9 or Q10 differs from Q16 then go to Q17]

Q17 To summarise, you have indicated previously (Q9 or Q10) that you would expect the ticket to be (...) cheaper. You have now indicated (Q16) that you would want the ticket to be (...) cheaper. Which would you say is the more accurate answer?

Record question number in box

End Interview

PASSENGERS WHO PREFER ANOTHER AIRPORT - SHOWCARD 6

And finally assuming that the same airline service is available at all the London airports… [as in Q8]

Q18 Since you have indicated that you prefer (1st choice airport) to this airport, how much extra money are you willing to pay to fly return from there?

Record showcard band in box

[If Q12 differs from Q18 then go to Q19]
Q19 To summarise you have indicated previously (Q12) that you would be willing to pay (...) in order to fly return from your preferred airport. You have now indicated (Q18) that you would be willing to pay (...) to fly from there. Which would you say is the more accurate answer?

Record question number in box

THANK YOU FOR YOUR HELP