Office for National Statistics

Quality adjustment paper on:

ISIC (Rev.4) H51 – Air Transport

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Introduction

- Statistics Austria contributed a revisited sector paper to the 24th Voorburg Group (VBG) in Oslo (2009)

- Difficulty in the collection of air transport price data due to potential quality change.

- Air transport tickets subject to changes in characteristics:
  - Restrictions in baggage weight
  - Meals, refreshments and extras including in ticket price
  - Flexible ticket options

Introduction continued

- Purpose of this presentation (and accompanying paper) is to recommend best practice in the 'quality adjustment consideration'

- Remember – mandate for Voorburg: **'Internationally comparable measures of Service Sector GDP at constant prices'**

- Not just pricing 'like-for-like' – more consideration required.

The quality adjustment problem

- System of National Accounts (SNA) treats differences in quality as differences in volume. A change in quality needs to be reflected in the accounts as a change in volume.

- Conceptually, the objective of a price index is to price to constant quality – price 'like-for-like' services.

- How can we apply these principles consistently to the air transport industry?

The problem continued

- Ticket prices can change on a regular basis in the air transport industry:

  – Baggage restrictions/inclusions

  – In flight refreshments, meals etc.

  – Flexible ticket options

  – Seat pitch etc…..

- Consider a change in price caused by additional baggage premium included in the ticket price

Example 1

- 2009 price for London-Luxembourg = £200
  – Basic ticket price with no baggage allowance
- 2010 price for same route now £220
  – Inclusive baggage allowance now included at a premium of £20
- Should we quality adjust?
- Consideration 1 – what is the volume measurement for this industry in the national accounts and should the change in characteristic be reflected as a change in this output?
- Assume volume indicator is current price turnover deflated by constant quality price index.

Example 1 continued

- Consideration 2 – does the change reflect a change in inputs for the supplier and a change in utility for the consumer?

- Inclusive baggage is a change in price mechanism for supplier (inputs remain the same) and no change in service for consumer.

- Therefore – no quality adjustment ! This should be reflected in the accounts as a price change

Example 1 continued

Table 3 Price, volume and turnover data for the Example 1: Baggage

Example 1 : Baggage

	Observed price (£)	Quality Adjusted Price (£)	Price index	Observed Turnover (£)	Derived (constant period 2009 price) volume	Change in volume
2009	200	200	100	8,000,000	8,000,000	-
2010	220	220	110	8,800,000	8,000,000	0.0%

Example 2

- 2009 price for Cardiff-Dublin = £140
  - Basic ticket price with 34 inch seat pitch
- 2010 price for same route now £126
  - Seat pitch now reduced to 30 inch
- Should we quality adjust?
- Consideration 1 – again assume volume indicator is current price turnover deflated by constant quality price index. More passengers for same aircraft

Example 2 continued

- Consideration 2 – reduction in seat pitch requires aircraft reconfiguration – change in inputs

- Smaller seat pitch reduces the amount of leg room and comfort for traveller. Change in utility (and quality)

- Therefore – quality adjust ! This should be reflected in the accounts as a volume change

- In this example we assume that the airline has confirmed the full change in price is attributable to the change in quality.

Example 2 continued

Price, volume and turnover data for the Example 2: Legroom

Example 2 : Legroom (consumer)

	Observed price (£)	Quality Adjusted Price (£)	Price index	Observed Turnover (£)	Derived (constant period t price) volume	Change in volume
2009	140	140	100	5,000,000	5,000,000	-
2010	126	**140**	100	5,250,000	5,250,000	5.0%

If no quality adjustment carried out – volume increase is overstated:

2010	126	**126**	90	5,250,000	5,833,333	16.7%

Limitations and further considerations

- What if a different volume indicator is used in the accounts – for example the UK and France use air kilometres x passengers?

- What if both a change in quality and a pure price change needs to be reflected?

  - Important to use explicit method of price adjustment in this case. Only USA and Australia reported that they use explicit methods in quality adjustment of air transport prices.

What about the other changes?

- Flexible ticket options:
  - Change in ticket price as ticket now transferable

- Inclusion/exclusion of meals and refreshments
  - Meals no longer included or now included in ticket price

- Express check in options
  - Ticket price increased as 'fast lane' check in now provided

Conclusion and recommendation

- No universal rule – will differ depending on the view taken by each country and how the change should be reflected in the national accounts

- **Key message – to ensure consistency, should ultimately consider how the change should be reflected in the accounts.**
  - How is the volume of the industry ultimately measured in the accounts – and is the change in characteristic a change in this output?
  - Does the change effect both supplier (inputs) and consumer (utility)

- May lead to a decision not to quality adjust when a change in characteristic is present. Against the price index ideal of like for like products? Will need to be careful with 'product creep'.

- If evaluated as a change in quality, will need to decide on the most suitable method of adjustment.

Questions & discussion

- Thank you

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