Methodology of the Monthly Index of Services

Water Transport Industry Review

Introduction

At the launch of the experimental Index of Services (IoS) in December 2000, a commitment was made to review and improve where practical, the sources and methods used to measure the service sector. This paper outlines the findings of the Water Transport Industry Review.

Summary

The industry review for water transport has recommended:

- to introduce the Retail Price Index (RPI) for sea fares to deflate the International Passenger Survey (IPS)
- to introduce Department for Transport (DfT) data on road goods vehicles travelling to mainlaind Europe
- to introduce the Corporate Services Price Index (CSPI) for sea and coastal freight for freight sea and coastal water transport

Although the methodology will be changed all the way back to 1994 in the IoS system, only the open period from 2002 will be revised. The main impact of the new methodology is stronger growth in each year from 2002.

How important is Water Transport?

In terms of gross value added (GVA) weights in 2002, water transport (SIC[1] Division 61) represents:

- 0.3% of the IoS
- 0.2% of Total GVA

Water Transport is published as part of the Transport and Communication[2] component within the IoS.

[1] The SIC is the Standard Industrial Classification, and this is the classification system used in the UK to define industrial groupings. The 4-digit refers to the level of detail and is generally the level at which data is collected and aggregated from within GDP(O) and IoS. More detail on this can be found in the IoS Methodology documentation

[2] This covers the following sections of the UK SIC: I Transport, Storage and Communication

Methodology

Previous methodology[3]

Within Division 61 there are 2 4-digit SICs[4], which are grouped into 3 composite SIC groups. Table 1 below gives the detail of the groups as well as the methodology that was previously used:

Table 1

Group /Class	Industry Description	Output Indicator	Source	Current Deflator	GVA weight per 1000	IoS weight per 1000
6110/1	Passenger sea and coastal water transport	Deflated International passenger revenue	IPS	HE Sea travel deflator	0.6	0.9
6110/2	Freight sea and coastal water transport	1. Tanker receipts at 2001 prices:				
		a. Time charters (£million)	BoP	Deflated at source	0.0	0.0
		b. Freight on imports (£million)	BoP		0.0	0.0
		c. Freight on exports and cross trades (£million)	BoP		0.2	0.3
		2. Dry cargo receipts at 2001 prices:				
		a. Charters (£million)	BoP	Deflated at source	0.0	0.0
		b. Freight on exports (£million)	BoP		0.1	0.2
		c. Freight on imports (£million)	BoP		0.2	0.3
		d. Freight on cross trades (£million)	BoP		0.5	0.7
		3. Interpolated from annual series for inter-port and one-port shipping (billion tonne-km)	DfT		0.1	0.2
6120	Inland water transport	Interpolated from annual series for non-seagoing waterway traffic (billion tonne-km)	DfT		0.1	0.1

IPS – International Passenger Survey, HE – Household Expenditure, BoP – ONS Balance of Payments, DfT – Department for Transport

For passenger sea and coastal water transport, passenger revenue data on sea travel from the IPS is used. This is deflated by an implied deflator for sea travel.

For freight sea and coastal water transport, the data is taken from a survey of turnover receipts run by the Chamber of Shipping for the Balance of Payments. This is deflated by bespoke deflators including the Drewry index. Within this methodology quarterly Chamber of Shipping data is benchmarked onto more comprehensive annual data.

For inland water transport an annual direct volume indicators of non seagoing waterway traffic is used from the DfT.

Reasons for review

The main reasons for reviewing the recreation industry were as follows:

- The passenger sea and coastal water transport is missing the output from business-to-business transactions (i.e. road freight)
- The benchmarking of the Chamber of Shipping quarterly onto annual data uses non-standard ONS methods

[3] In this report, the previous methodology refers to the methodology used prior to Blue Book 2005, and the new methodology to the methodology taken on at Blue Book 2005

[4] See SIC 2003 documentation for details of the full breakdown of division 61 in the UK SIC - http://www.statistics.gov.uk/sic2003

- More appropriate deflators are available for deflating the output of freight sea and coastal transport
- progress from Eurostat on guidance for price and volume measurements – embodied in the manual published October 2001

What should we be doing?

In October 2001, Eurostat (European Union's Statistical Office) published the 'Handbook on price and volume measures in national accounts'. The handbook provides guidance by product, on what price and volume methods should ideally be used (A methods), are acceptable methods (B methods) and those methods that should not be used (C methods). The handbook has been written in the context of annual data but the same rules apply to sub-annual data.

The handbook gives limited guidance in this industry and reinforces the general view that deflated turnover is preferred for market output deflated by quality adjusted series that represent the services provided. Volume indicators based on passenger-kilometres for passenger transport are B methods, although the more detail available for these volume indicators, the better will be the result. Volume indicators should at least distinguish between the different classes of travel. For freight transport, volume indicator methods based on tonne-kilometres are B methods.

Issues faced by the industry review

Each group will be looked at individually, rather than generalising by issue as has been the practice with previous reviews. Therefore, each section will review key features, output definition, issues and recommendations.

6110/1 Passenger Sea and Coastal Water Transport

Key features

This group includes ferries, the rental of ships for passenger conveyance and transport of freight.

Output definition

The ideal output measurement is the use of current price data deflated with a relevant PPI for an A method. However passenger-kilometres as a volume indicator are B methods as it is assumed that travel habits of the population do not change significantly.

Issues

- Should VAT be used instead of the IPS?
- Coverage of the IPS
- Deflator options
- Missing output

IPS v VAT

The review found that VAT shows a more volatile path, whereas the IPS has an obvious seasonal pattern and smooth trend. The IPS is available sooner than VAT data, is based on pure monthly internal data source. This led to the conclusion that the IPS data should be maintained. A summary of additional benefits and issues regarding VAT can be found as an annex to this paper.

Coverage of IPS

The IPS collects both UK and Foreign revenue data. It measures the output of passengers over water, but does not include revenue from sales on extra services such as shops and restaurants on ferries, and business to business transactions.

Deflator

The previous deflator includes passenger travel by ship, boat, ferry, hovercraft and hydrofoil. The review found that a RPI for Sea Fares available which basically includes the same items as the HE for Sea Travel, but would be picked up directly. In terms of business-to-business transactions, the ONS does publish a CSPI for Commercial Vehicle Ferries. However, the review concluded that as there is currently no commercial turnover data, the CSPI would be inappropriate.

Missing output

As alluded to above, the previous indicator excludes on-board sales and business to business transactions. Although on-board sales may be significant in terms of turnover, since this a trade margin[5] activity, its contribution to GVA would be less.

For the business-to-business element, it is clear that a significant proportion of passenger ferries revenue is derived from lorries. This commercial revenue is also less seasonal than passenger traffic, and it is clear that it should also be measured. The review has introduced a DfT data series entitled 'Road Goods Vehicles Travelling to Mainland Europe'. This is a survey of roll-on/roll-off ferry operators in the UK and counts the number of powered vehicles (lorries etc.) and unaccompanied trailers (without powered unit / cab) carried on each mainland Europe route.

Recommendation

1. Keep the IPS as a proxy for the passenger section deflated using RPI for Sea Fares

2. Introduce DfT data on 'Road Goods Vehicles Travelling to Mainland Europe' for business-to-business output

[5] In retailing and wholesaling, the main part of the output is the trade margin. A trade margin is roughly the difference between the sales price and the purchase price of a good that is being traded (See ESA95 para 3.60 for a more precise definition). The trade margin can be seen as the price the buyer pays for the trade service although there is no direct transaction.

6110/2 Freight Sea and Coastal Water Transport

Key features

This five digit class measures the transport of freight over water, whether scheduled or not, and also the rental of ships and boats for transport of freight.

Output definition

The output of this class is the fee received for transporting goods from A to B, however this can be dependant on several factors such as distance between A and B, the weight of the freight and the kind of product.

Issues

- Deflator options
- Benchmarking of turnover data
- Detail of indicators

Deflation

The review has recommended that the CSPI for Sea and Coastal Water Freight should be used to deflate the turnover for this group. The series covers both wet and dry cargo, although it does also cover coastal water freight which is outside of this industry. However, given the relative size of coastal freight (around a quarter), this is a minor issue, which is outweighed by the good coverage and appropriateness of the CSPI.

Benchmarking

ONS commission the Chamber of Shipping to collect a range of information from their members each quarter. This is bolstered by a more comprehensive survey each year, to which the quarterly data is benchmarked. Previously the benchmarking used the ratio of the quarterly to annual data to adjust the quarters, which caused step-changes in the series. The new methodology will adopt the ONS standard benchmarking tool[6] to improve this.

Detail of indicators

This group accounts for 0.1% of GDP, and previously consisted of eight classes. The review concluded that given the detail of the new deflator and the size of the industry, the detail should be reduced to a three-way split of wet cargo, dry cargo and inter-port coastal/one-port shipping. At this level the series are heterogeneous.

Recommendation

3. Change the deflator to the CSPI for Sea and Coastal Water Freight CSPI

4. Use the ONS standard benchmark tool for benchmarking quarterly Chamber of Shipping data onto the annual

[6] For more information on benchmarking, please see the IoS Methodology documentation on the NS website: http://www.statistics.gov.uk/iosmethodology/time_series_methods.asp

5. Reduce the level of detail of sub-series

6120 Inland Water Transport

No recommendations to change this group have been made at this time.

Who was consulted as part of the Industry Review process?

Within the ONS, there was comprehensive consultation with relevant teams both within National Accounts and in the survey areas. In terms of external consultations we are grateful to the assistance received from the DfT and the Chamber of Shipping.

New methodology

In summary the industry review for division 61 made the following recommendations that were implemented at Blue Book 2005:

- to introduce the RPI for sea fares to deflate the IPS
- to introduce DfT data on road goods vehicles travelling to mainlaind Europe
- to introduce the CSPI for sea and coastal freight for freight sea and coastal water transport

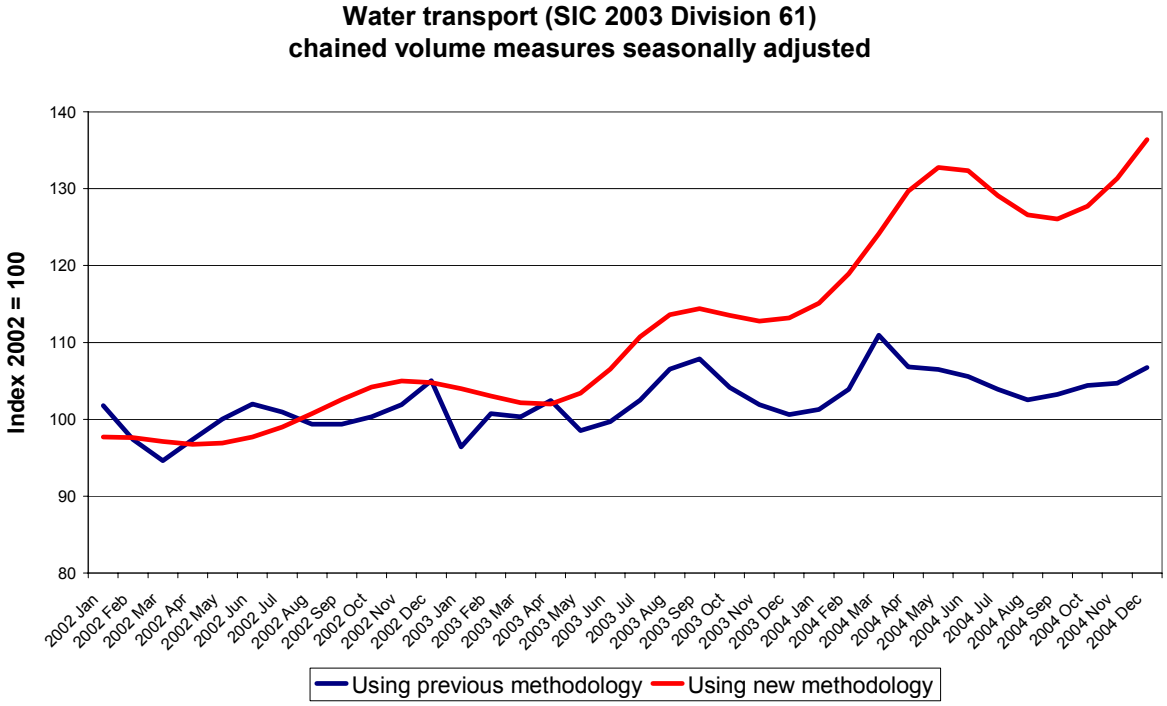
Benefits and assumptions of new methodology

Benefits		Assumptions
More comprehensive measure of the output of ferry companies	&	Sales on board ferries move in line with revenue
Improved deflation of a number of components		
Introduction of standard ONS function for benchmarking, making the methodology more robust		

Impact of new methodology

The graph below shows the impact of the new methodology on Division 61. The data has been revised back to January 2002. This in line with the open period for revisions set-out in the National Accounts Revisions Policy for Blue Book 2005.

Figure 1



Contact Information

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Annex

Comparison of new and old methods

Group/ Class	Industry Description	Current Output Indicator	Current Deflators	Proposed Output Indicator	Proposed Deflators	GVA weight per 1000	IoS weight per 1000
6110/1	Passenger sea and coastal water transport	Deflated International passenger revenue	HE Sea travel deflator	Deflated International passenger revenue	RPI for sea fares	0.4	0.6
				DfT Road goods vehicles travelling to mainland Europe	N/A	0.2	0.3
6110/2	Freight sea and coastal water transport	BoP: Tanker receipts at 2001 prices (£million)	Deflated at source	BoP: Tanker receipts at current prices (£million)	CSPI for sea and coastal water freight	0.2	0.3
		BoP: Dry cargo receipts at 2001 prices (£million)	Deflated at source	BoP: Dry cargo receipts at current prices (£million)	CSPI for sea and coastal water freight	0.8	1.1
		Interpolated from annual series for inter-port coastal and one-port shipping (billion tonne-km)	N/A	As current	As current	0.1	0.1
6120	Inland water transport	Interpolated from annual series for non-seagoing waterway traffic (billion tonne-km)	N/A	As current	As current	0.1	0.1

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