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Travel agency and tour arrangement services

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1. Introduction

Travel agencies and tour operators play an intermediary role linking producers of travel services (e.g. air passenger transport, accommodation, etc) to consumers. Generally, travel agency and tour arrangement services can be regarded as a type of distributive services where the underlying products sold are travel services. In pricing this type of services, one faces two important issues similar to that in pricing distributive services in selling goods, i.e. how to measure margin prices when they are not directly observable, and how to treat quality change and adjustment.

The purpose of this paper is to discuss: 1) these issues in the context of Australia's travel agency and tour arrangement services industry, and 2) options for compiling an output price index based on the concept of margin services similar to that in pricing trade margin in selling goods. The ABS currently does not publish a producer price index for travel agency and tour arrangement services. The ABS undertook a feasibility study of pricing these services previously. Development of a price index for the output of this industry is part of the ABS's current major program of extending the industry coverage of services producer price indexes.

The paper is organised as follows. Section 2 discusses the relevant classification structure. Section 3 discusses the specific services to be priced. Section 4 presents an overview of the Australian market conditions. Section 5 discusses the national accounts concepts covering travel agency and tour arrangement services. Section 6 discusses the relevant concepts, pricing methods and related issues including quality adjustment. Section 7 concludes.

2. Standard classification structure

The ABS compiles producer price indexes (PPIs) using the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 06). Table 2 is a summary of part of the classification structure of ANZSIC 06 and the International Standard Industrial Classification (Revision 4) (ISIC v4) that cover travel agency and related services. ANZSIC 06 Class 7220 - Travel agency and tour arrangement services includes units engaged in acting as agents in selling travel, tour and accommodation services, providing travel arrangement and reservation services for airlines, cars, hotels and restaurants, arranging, assembling, wholesaling and retailing tours. A small part of ANZSIC 06 Class 7299 – Other administrative services not elsewhere classified, covers tourist information centre operation.

ANZSIC 06 classification of travel agency services is largely aligned with ISIC v4. The latter has a further split between travel agency activities and tour operator activities which are included in ISIC Class 7911 and Class 7912, respectively. A third ISIC Class, 7990 – Other reservation services and related activities, corresponds partially ANZSIC 06 Class 7299 (tourist information centre operation) and Class 7220 (travel related reservation services).

In Australian National Accounts, the annual input-output table is compiled at both the industry group and product levels, based on the Input-output Industry Group (IOIG) and Input-Output Product Classification (IOPC), respectively. At the IOPC level, the two relevant IOPCs are IOPC 72200010 - Travel agency and tour arrangement services and IOPC 72990010 - Tourism information centre operation. In the ANZSIC to IOIG concordance, the activities under ANZSIC 06 Classes 7220 and 7299 are covered in Input-Output Industry Group (IOIG) 7210 – Employment, travel agency and other administrative services.

Table 2: Classification structure: ISIC v4 versus ANZSIC 06

ISIC v4 Div N Administrative and support activities	ANZSIC 06 Div N Administrative and support services
Subdiv 79 - Travel agency, tour operator, reservation service and related activities	Subdiv 72 - Administrative services
Group 791 - Travel agency and tour operator activities	Group 722 - Travel agency and tour arrangement services
• Class 7911 - Travel agency activities	• Class 7220 - Travel agency and tour arrangement services
• Class 7912 - Tour operator activities	
Group 799 - Other reservation service and related activities	Group 729 - Other administrative services
• Class 7990 - Other reservation service and related activities	• Class 7299 - Other administrative services not else included

3. The services to be priced and pricing unit of measure

Travel agencies and tour operators provide reservation and booking services, arranging and assembling tours, tour retailing and wholesaling services, transport ticket wholesaling services, and other services related to distribution of travel services. Travel agencies and tour operators act as intermediaries in distributing travel services on behalf of producers of the services. In some cases, they also provide add-on services such as travel management.

Travel agencies and tour operators derive their revenues primarily from fees or commission paid by producers of the original services, or by charging customers fees or a mark-up amount on top of the purchase cost of the original services. Therefore, travel agency and tour arrangement activities can be regarded as a type of distributive services or margin services (in selling travel services). The outputs of these activities can be measured as gross margin.

Ideally, pricing unit of measure for margin services should be dollar margin per unit quantity of original services sold. In principle, such measure can be used, regardless of whether they are in the form of mark-up, commission or fees. However, in the real situation, it may not be feasible to collect both prices and quantities for purchase and resale of the original services. For example, it is more feasible to collect total sale value than collecting both sale prices and quantities. Thus, one needs to adopt a more practical approach to measuring margin price, for example, an approach similar to the ABS's approach to compiling retail margin price indexes where margin price is measured as percentage margin applied to fixed sale volume.[1] In this approach, measurement of purchase and sale values, and a suitable price index that matches the corresponding travel services products are required to estimate the margin price. Here the price index is used for deriving a fixed sale volume.[2] The price concept of margin services in distributing travel services is discussed further in Sections 6.2 and 6.3.

[1] For the detail on the ABS's approach to compiling retail margin price indexes, see the ABS Information Paper – Experimental Producer Price Index for the Output of the Retail Trade Industry.

[2] In the ABS's retail trade price index, the CPI is used for calculating the fixed sale volume.

4. Market conditions and constraints

Australia's travel agency and tour arrangement services industry is highly competitive, with the market structure characterised by a few big businesses (such as Flight Centre and Helloworld[3]) and a large number of small to medium size companies competing in various market segments. There are total 4897 businesses as counted at the end of financial year 2012-13.[4] The total output in travel agency and tour arrangement services and other related services for 2009-10 is about $7b (based on the ABS's Input-Output Table of financial year 2009-10). Travel agency and tour arrangement services account for $5.8b and tourist information centre operation accounts for the remainder $1.2b (Table 1). The overall output shows an increasing trend except for the period 2008-09 during which the Global Financial Crisis (GFC) had an impact on tourism. In Australia, tourist information centre operation is mostly funded by governments.

Table 1: Output value ($M) of travel agency services and other related services

Market segment	2006-07	2007-08	2008-09	2009-10
Travel agency and tour arrangement services (IOPC 72200010*)	4,788	5,300	5,211	5,824
Tourist information centre operation (IOPC 72990010)	1,073	1,227	1,072	1,168
Total	5,861	6,527	6,283	6,992

*The Input-output product classification (IOPC) used in Australian National Accounts. See Section 4.

Figure 1 shows the distribution of businesses by state/territory, which follows closely with the distribution of the Australian population.[5] Businesses are concentrated mainly in New South Wales (NSW), Victoria (Vic) and Queensland (Qld), with NSW accounting for the largest proportion, nearly 38% of the total.

The businesses can be broadly grouped into four categories: retailers, wholesalers, ticket consolidators, and tour operators (inbound and outbound). Retailers sell travel products directly to the end users such as leisure, corporate or business clients. Wholesale travel agencies sell to travel retailers. Their sales involve publishing and distributing tour brochures and arranging travel packages including travel arrangements. Ticket consolidators mainly sell airline tickets to retail travel agencies at a mark-up. Inbound tour operators act as intermediaries between offshore buyers and the supply of transport, accommodation and tourism packages in Australia. Australia's inbound tourism is generally affected by factors such as the economic conditions (such as income) in inbound source markets and the Australian dollar (Tourism Research Australia 2011).

The industry has evolved significantly in the past decade, with growing travel agency services through the internet–this is in line with increasing online retail trade in general.[6] Online services allow direct

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[3] IBISWorld estimated that Flight Centre is by far the largest in terms of revenue, followed by Helloworld (formerly Jetset TravelWorld). (IBISWorld Industry Report: Travel Agency and Tour Arrangement Services in Australia 2014.)

[4] Businesses under ANZSIC 06 Class 7220 (ABS 2014a).

[5] The population data was sourced from the ABS Publication: Australian Demographic Statistics (cat. no. 3101.0).

[6] The ABS's recent Multipurpose Household Survey (MPHS) for 2012–13 shows that in Australia, about 76% of internet users used the internet to purchase or order goods or services and, of those, 74% purchased/ordered travel, accommodation, memberships or tickets of any kind (ABS 2014b).

connection between producers of original travel services and consumers. For example, airlines are now able to sell air tickets directly to consumers through online services without using an intermediary.

Growing online travel agency services, in particular online booking and reservation services, led to increasing competition in the industry and decreasing market share of traditional bricks-and-mortar shopfront travel agencies. However, there is some evidence that traditional shopfront travel agencies are adapting in the age of online retail by offering both traditional shopfront services and online services.

In Australia, travel agencies are currently regulated through a licensing scheme administrated by the Travel Compensation Fund (TCF). [7] Member travel agencies are required to provide annual financial performance reports to the TCF demonstrating that they meet the financial performance criteria. The information collected by the TCF can be useful for estimating travel agency services.[8] However, as a result of the recent review of the TCF operation, governments of states and territories signed off the Travel Industry Transition Plan (TITP) under which the TCF will wind down their operation and be phased out in 2015.[9]

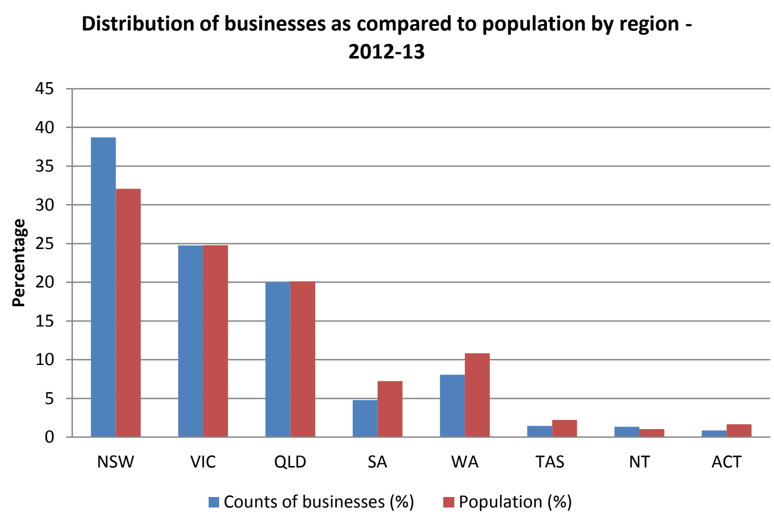

Figure 1: Distribution of businesses (travel agencies and tour operators) by region. The population distribution by region is shown for comparison.

5. National accounts concepts and measurement

5.1 Concepts and measurement

Although there is no specific guidance in the System of National Accounts 2008 (SNA 2008) on the treatment of travel agency services in national accounting, both the International Recommendations for Tourism Statistics 2008 (IRTS 08) and Tourism Satellite Account: Recommended Methodological Framework 2008 (TSA-RMF 08) have detailed recommendations on the conceptual basis for the

[7] The TCF licensing scheme does not cover travel agencies operating in the Northern Territory.
[8] See the ABS publication: Travel Agency Services 2003–04 (2006, cat. no. 8653.0).
[9] COAG Legislative and Governance Forum on Consumer Affairs. 2012. Travel Industry Transition Plan.

measurement of travel agency services. It was recommended that the output should be treated as gross margin regardless of whether the revenue is in the form of mark-up, fees or commission (see Section 2). This concept is used in the Australian National Accounts and Tourism Satellite Account (TSA).[10]

In the Australian National Accounts, annual GDP is compiled in the supply-use framework at the product level (the IOPC Table) using variety of data sources. The Annual Integrated Collection (AIC) which is the key data source for the National Accounts.

The ABS derives chain volume estimates of annual gross value added (GVA) using the double deflation method at the product level. In this method, the supply and intermediate use are deflated separately by an output price index and an input price index. National Accounts deflators are mainly sourced from PPIs. As there are currently no PPIs for travel agency and tour arrangement services, a relevant PPI at an upper level is used for deflation.

The ABS currently compiles TSA only in current prices. The ABS intends to include chain volume estimates in the TSA. [11]

Apart from use of PPIs for annual deflation in the supply and use framework, the ABS also uses PPIs for quarterly deflation, such as the ABS's Quarterly Business Indicators Statistics (QBIS) on key business indicators (e.g. sales, wages and salaries, profit) for selected industries (ABS 2004c). A chain volume estimate is usually obtained using a weighted average of relevant PPIs and other price indexes.

5.2 Use of the services

Although both the National Accounts and TSA use the same concept in measuring travel agency and tour arrangement services, there is a difference in the representation of use of the services. In the National Accounts, when the commission or fees are paid by producers of travel services (e.g. airlines), the margin services (or distributive services) are treated as being purchased and used by the producers of travel services.

When margins (e.g. mark-up or fees) are included in the total price paid by customers, the margin services are treated as being purchased by the customers. Increasingly, travel agencies charge additional fees (to customers) to make up a reduction in commission paid by the provider of the travel services. In this case, where possible, use of a margin service should be split between the producer who paid the commission and the customer who paid top-up fees.

Based on the 2009-10 IOPC table, about 85% of travel agency and tour arrange services are used in the intermediate demand versus 15% (7% for households and 8% for export) used in the final demand. This suggests that the margin services in selling travel services are mostly consumed in the intermediate demand.

In the Australian TSA, travel agency and tour arrangement services is regarded as being provided directly to customers, irrespective of who pays the commission or fees. So, the price paid by customers is split into a margin (travel agency services) and price for travel services (net commission or fees) that are intermediated. Such treatment fits the purpose of a TSA and in line with the TSA-RMF 08's recommendations that the services are treated as a separate category of tourism characteristics activities in the TSA.

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[10] The ABS compiles and publishes the Australian TSA, funded by Tourism Research Australia. See the ABS Publication: Australian National Accounts: Tourism Satellite Account 20012-13 (cat. no. 5249.0).

[11] The ABS Information Paper: Australian National Accounts: Tourism Satellite Account – Introduction of Experimental Chain Volume Estimates 2012-13 (cat. no. 5249.0.55.004).

The difference in representation of the use of travel agency services should have no impact on the estimate for outputs of travel agencies and tour operators.[12] However, a question arises as to whether such difference has implications for constructing a PPI for the output of travel agencies and tour operators. In the economic approach, an output price index is calculated from the perspective of an establishment's production (a travel agency or a tour operator), not the user's perspective (Section 6.3). Thus, from the perspective of the production function, such difference should have no effects in constructing an output price index for the output of travel agencies and tour operators.[13]

6. Pricing methodologies

As the outputs of this industry can be regarded predominantly as distributive services (or margin services), in this section, we focus on some of the conceptual aspects of pricing margin services where the original products being sold are services, and discuss a general approach to developing an output price index for the travel agency and tour arrangement services industry, based on the concept of margin similar to a trade margin in selling goods.

6.1 The price concept of margin on goods

The SNA 2008 has specific recommendations on how to treat margin services in selling goods. The SNA 2008 defines a trade margin as *the difference between the actual or imputed price realised on a good purchased for resale and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of* (see SNA 2008, paragraph 6.146). In terms of the production function for margin services, the central part of the SNA 2008's concept on trade margins is that goods being sold are not treated as part of intermediate inputs into the production of margin services. Applying this concept to retail trade in goods, the unobservable retail trade margins price should be calculated as the difference between the price at which the product is sold and the current replacement cost, to the retailer, of the product sold.

The ABS developed an experimental index for retail trade services in goods, based on the SNA 2008's concept of trade margin (ABS 2013). To overcome the practical difficulty in collecting data on prices and quantities for both sale and purchase, the ABS adopted the practical approach where margin price is calculated as percentage margin multiplied by fixed volume of sale. The latter is the value of the sale fixed to a price reference period (i.e. the `preserved' volume). The percentage margin can be calculated approximately as (value of sale - value of purchase)/value of sale (with appropriate adjustment for taxes and subsidies). The preserved volume is obtained by price indexing the gross value of the sale from a price reference period to the current period. The CPI components that match the commodities being sold are used for deriving the preserved volume.

In principle, the concept of margin price developed specifically for measuring trade margin in selling goods can be extended to the case where the original products are services such as travel services.

[12] The difference may have implications in splitting between inbound and outbound tourism estimates since the visitor, travel agency, and provider of travel services may not be in the same economic territory (e.g. TSA-RMF -08, Nijhowne 2004).
[13] However, the difference may have implications for quality adjustment if the user's utility is considered as having a role in determining quality of the services (e.g. Loranger 2012).

6.2 The price concept of margin on services

A major difference between distributive services (or margin services) in selling services for a third party and those in trading goods is that in reselling services, the intermediary does not actually own the underlying services. What is sold in distributing services is the right to access to the services. It is the producer of the original services who finally serves the customer. By contrast, in trade margin on goods, a producer of margin services actually purchases physical goods and resells them. Another difference between these two types of distributive services, especially in retailing, is that for retail trade in goods, margin services are usually treated as being provided directly to customers – as the customers usually pay for the services. However, for retail in selling travel services, gross margins can be from commission or fees paid by producers of the original services.

Despite these differences, in both cases, the cost of purchase of original products is not considered as intermediate inputs into the production of distributive services. The intermediate inputs should only include those inputs directly relevant for the production of distributive services, e.g. labour, cost of operating the outlet, etc. Thus, the concept of trade margin in selling goods can be extended to the case of margin on services. A practical approach to pricing margin on selling services may be formulated based on this concept.

It is worth emphasising that although gross margin on travel services may be paid by producers of travel services (e.g. commission), the concept of margin is still valid for the purpose of compiling an output PPI from the theoretical point of view. The economic theory for output PPIs is formulated from the perspective of an establishment's production (of margin services), not the users perspective (see Section 6.3 for detailed discussion).

To illustrate how the concept of margin on services is applied to travel agency and tour arrangement services, assume that original services sold to consumers can be categorised into homogeneous groups, for example, booking of domestic air tickets, international air tickets, and accommodation. For air tickets, further splits can be made by different types of air fare (economy versus business) and routes. In an ideal case, we assume that both percentage margins and values of sale are available. For each group, a margin price can be calculated as percentage margin times the preserved volume of sale in each group. In practice, different methods for calculating margin prices may be needed for different situations.

For example, when the revenue is from a mark-up (percentage) included implicitly in the final price of travel services sold to customers, one needs to first calculate percentage margin based on values of sale and purchase. Margin price is calculated as usual, i.e. as percentage margin times preserved volume of sale.

When the revenue is from commission or fees, one needs first to convert them to percentage margin based on the sale value. The corresponding margin price can be derived based on the percentage margin and preserved volume of sale.

In both cases, the preserved volume can be calculated in a way similar to that used in compiling a retail margin price index (Section 6.1). For example, for sale of air tickets in a particular category, the preserved volume of sale in that category can be calculated from the sale in a price reference period and a price index measuring changes in prices of air passenger transport services in that category. The price index could be sourced from appropriate PPI components.[14] When percentage margin is given or can be calculated from the sale and purchase data, the corresponding margin price equals percentage margin

[14] Here it is preferable to use a PPI due to that PPIs cover products provided to businesses and consumers as in the case of travel agency and tour arrangement services.

times the PPI in the current period times the sale value in the price reference period, where the PPI is assumed to be 1 in the reference period.

6.3 Quality adjustment

Quality adjustment is generally a major challenge in pricing outputs of services industries. This is especially the case in pricing distributive services due to the difficulty in both defining quality of distributive services and making quality adjustment in practice. The following discussion is applicable to distributive services in general.

To determine what define the quality of margin services, it is useful to consider the economic concept of an output price index (Fisher & Shell 1972, also see the PPI Manual[15]). In the economic approach, an ideal output price index for an establishment can be defined as the ratio of maximised revenues in two comparison periods where both inputs and technology in the production are held fixed (e.g. Triplett 1983). This theoretical output price index is usually referred to as the fixed-input output price index (FIOPI). In the FIOPI framework, quality is defined from the production point of view. As such, any change to inputs and technology of the production should be regarded as quality change.

Applying the FIOPI framework to the production of margin services such as travel agency and tour arrangement services, it is appropriate to treat characteristics of an outlet (i.e. establishment producing distributive services), such as location, opening hours, and specific layout of the shop, as part of the characteristics of the production function. Thus, a change in these characteristics should be viewed as quality change. An implication of this concept in compiling an output price index is that where possible a price index should be compiled by outlet. For this reason, the ABS compiles retail trade margin price indexes on the outlet basis.

Since the price concept of margin is not entirely independent of original goods and services being sold, this raises a conceptual question as to whether quality of the original goods and services should be part of the quality determinant factors for margin services.

In the case of trade margin on goods, although SNA 2008 explicitly treats original goods as being passed directly to purchasers, not as an input to the production function of margin services, there are no specific recommendations on whether quality of the goods should play a role in determining quality of the margin services.

There are two different views on this issue (Garneau et al. 2011, Loranger 2012). One view is that quality of original products should not be part of the quality of margin services. As margin price is not observable – it is imputed from the values of sale and purchase, the calculation of the margin price requires separation of volume change from price change, which can be achieved, for example, by deflation using a price index. One may regard that quality change in goods is implicitly taken into account through the relevant quality adjustment in the price index that is used as the deflator. The alternative view is that quality of original products should play an explicit role in determining the quality of margin services. Although there are no complete resolutions to this issue, the first view appears to be the more widely accepted (Loranger 2012).

Apart from the conceptual issue on quality adjustment in pricing distributive services, there is a practical issue in adjusting for quality change due to a change in characteristics of outlets. For example, in theory,

[15] International Monetary Fund et al (2004).

refurbishment of the shop should be regarded as kind of quality change. In practice, it is not feasible track such change in every outlet sampled when compiling a price index.

6.4 Options for compiling an output price index

In this section, we discuss two specific options for compiling an output price index based on the concept of margin services. Choosing an appropriate option largely depends on the availability of relevant data, on a basis of individual categories of travel services.

Option 1: Collect data on mark-up (as percentage), commission and fees as well as sale values of original products sold by product details. Since the sale data at product details may not be readily available, it may be practical to collect sale data at a more aggregate level, say at the product category level. In the case where data on percentage mark-up is not available, collect sale and purchase data which can be used to calculate percentage margin.

Option 2: Use the ABS's QBIS data as a proxy for net margin and collect some administrative summary data from travel agencies. The ABS's QBIS collects data on sales, incomes, and profit from the sales which may be used for estimating margins. Provided that administrative summary data on sales is available, the margin can be split to the lower level and the price indexes can be calculated at that level and weighted to produce a price index. The main advantage of this option is that the existing data from QBIS can be re-used. This means a less burden for providers. However, the respective timing of QBIS and PPI can be an issue, i.e. it may not be possible to use the most recent quarter of QBIS.

Another option is to use CPI for travel related products as a proxy for pricing travel agency services. However, this option is not recommended. Although the ABS compiles CPI for holiday tours, holiday hotel or motel accommodation, as well as international and domestic airfares, the index measures changes in prices of travel related products (not margin services) from the perspective of households. Therefore, the index is not suitable to be used as a proxy for pricing travel agency services.

6.5 Some other issues

Pricing services provided to large businesses

The main challenge in pricing travel agency services provided to large businesses is that the pricing structure employed by the provider is based on an individual contract. The services contracts are often unique, varying from business to business. Travel agencies offer add-on services such as travel management, which differ from those provided to other customers. Since the contract is usually negotiated by individual businesses, providers often offer certain discounts in the contracts.

A possible approach to pricing such services with a unique pricing structure is the component pricing approach. The method involves selecting a typical usage pattern, which can be broken down to a number of standard components, such as bookings domestic air tickets, international air tickets, accommodation, transaction fees, and travel management. These components can be priced using a fixed basket of `standard' items. The price indexes for basket items can be derived from direct sampling or using prices for comparable items for consumers. To capture discounts, price discounts should be included in designing a pricing model.

Pricing packaged tours

IRTS 08 recommended that margin services on packaged tours should be measured by unbundling a packaged tour product, for example into three separate components, i.e. the services themselves, the services provided by the tour operator and the margin of the travel agency. In principle, this approach should be adopted in pricing packaged tours. However, one may face issues such as difficulty in collecting detailed information on packaged tours. In some aspects, the challenges one faces are similar to those in pricing bundled products in telecommunications.

Issues with collecting samples

Since the market structure in the travel agency and tour arrangement services industry is characterised by a few large businesses and a large number of small to medium businesses with the latter combined having a significant market share, the purposive sampling method which is commonly used in compiling PPIs may not be sufficient. A method that is able to select a representative sample from a large population of small to medium businesses is needed.

Actual data collection from travel agencies and tour operators can prove to be a major challenge. The ABS's past experience showed that due to different accounting practices used and commercial sensitivity regarding margin data within the industry, it is difficult to collect data that meet the requirement for pricing margin services.

For example, providers have difficulties in reporting gross amount of sales when they are paid commission on sales of travel products and only the commission is recorded in their management account. In this case, other information such as relevant sale quantities may need to be collected. In some cases, providers may have difficulties in providing product details about their sale and purchase and sufficient information on packaged tours.

7. Conclusions

Travel agency and tour arrangement services can be regarded as a type of distributive services or margin services. The price concept of the margin is similar to that for trade margin in selling goods.

Thus, in principle, it is possible to develop an approach similar to the ABS's approach to pricing retail trade margin services on goods.

In pricing travel agency and tour arrangement services, one faces similar challenges to those in pricing retail trade on goods. For example, one has similar issues with quality adjustment which was previously discussed in the literature mainly in the context of trade margin on goods.

Collecting useful data from travel agencies and tour operators is a big challenge. This is mainly due to different bookkeeping practices in sale and purchase, and that data recorded in their management accounts do not always meet the requirement for the pricing purpose.

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