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SESSION 2: MINI PRESENTATIONS ON PRODUCER PRICE INDICES

THE DEVELOPMENT OF THE CORPORATE SERVICES PRICE INDEX FOR BUSINESS AIRFARES IN UK

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Introduction

This paper outlines the development, limits and challenge of the Corporate Services Price Index (CSPI) for **business airfares**. The index has been published as experimental by the UK Office for National Statistics (ONS) since 2000 (<http://www.statistics.gov.uk/downloads/experimental/CSPI.pdf>).

Chapter one gives a brief description of the UK air passenger transport industry and recent trends; chapter two summarises the development of the price index describing structure, sampling, pricing methodology and challenge for future improvements.

1. The air transport industry

1.1. Industry background

Air transport is an important industry in the UK, accounting for turnover of approximately £15 billion in 2001, the equivalent of 1.5% of the gross domestic product. In volume terms, around 180 million passengers travelled to and from the country by air in that period.

There are around 40 UK airlines currently operating large aircraft with scheduled and non-scheduled passenger and cargo services. Among them there are 27 UK operators providing scheduled passenger air transport. Scheduled passenger services represent 72% of the total revenues generated by UK airlines in 2001.

In recent years air travel accounted for most of the visits to and from the UK. Leisure visits and business visits accounted for 80% and 20% respectively of all visits by air to and from the UK in 2001. With the number of air passengers growing by an average annual rate of 6% over the last ten years¹, the air transport is a fast growing industry.

The main factors contributing to this expansion are:

- i) The deregulation process, which opened the industry to domestic and international competition;
- ii) The falling cost of air travel for consumers;
- iii) The globalisation process and the consequent rise in business travels;
- iv) The increase in leisure travels abroad.

The air transport industry is important not only for its direct contribution to the UK GDP, but also because it provides the transport infrastructure on which other parts of the economy depend. Rapidly growing sectors such as pharmaceuticals, computers, communication, banking and financial services are typically the most internationalised, hence dependent on air transport.

Air transport allows networking between companies and research centres located in different countries, encouraging greater innovation and growth. The ability for manager to travel quickly encourages both inward and outward foreign direct investments, as well as international trade. Some argue that development of communication technologies such as videoconferencing, the Internet, conference calls, could limit the importance of business

¹ Calculated using Civil Aviation Authority figures on terminal passengers from 1992 to 2002.

travel. However, experience over recent years showed that business travel has increased in most sector of the economy despite the increased usage of these alternative technologies.

1.2. The deregulation policy in the air transport industry

Since the middle of the 1980s, several changes took place in the European air industry. Under the pressure of the US Airline Deregulation Act (1978) and following the European integration process, the airline sector has undergone a process of transition from tight regulation, based on bilateral agreements, to liberalisation within the European market.

Before 1987, the UK government strictly controlled the airline industry through British Airways (BA), the UK's national carrier. In 1987 BA was privatised and, at the same time, the EU started to put in place a series of measures that led to the creation of a single aviation market within the EU. In April 1997 the liberalisation of cabotage allowed for free entry by European carriers in any international European route. This ended the use of traditional bilateral negotiations to organise air services inside the EU and opened the industry to international competition.

An important effect of the deregulation policy has been the development of low-cost carriers. Their business strategy is based on a simple product (no meals, narrow seats, free-seating etc.) with quick turnround times and low operating costs (on-line sales, use of secondary airport with low airport fees, low wages). They mainly target leisure passengers or price conscious business passengers on domestic and short haul routes.

With this strategy, low-cost carriers have been able to expand rapidly. According to American Express the share of passengers carried by low-cost carriers has grown in the past ten years from zero to a 20% market share in the UK.

The presence of low cost carriers, together with the growing importance of foreign airlines in the UK domestic market, changed the structure and nature of the industry by increasing competition and driving down the cost of travel for consumers.

Price competition has been intensified by the increased usage of electronic sales: traditional carriers, following the example of low cost carriers, are increasingly relying on online sales in the attempt to attract more customers. The internet has had a revolutionary impact on the industry, making it easier for potential customers to compare prices and at the same time forcing traditional carriers to match or better prices offered by low-cost carriers, whilst still offering higher standards of service (seat reservations, in-flight meals, etc.).

The increased competition has expanded the range of choice available to the consumer by increasing the availability of cheap and frequent flights and extending the number of routes covered. Air travel has become more affordable for a broader section of the population, resulting in higher demand.

1.3. Recent trends

The air transport industry is cyclical and strongly influenced by macro-economic factors. Since 2000 there have been signs of a general slow down in the global economy, which negatively affected the overall transport industry.

In 2001 two events had a major impact on travel and exacerbated the already difficult situation: firstly, a serious outbreak of foot and mouth disease in the early part of 2001 affected travel to the UK; secondly, the aftermath of the events of 11th September resulted in delays or the complete abandonment of travel plans world-wide. In 2002 the events in the Middle East increased uncertainty, further depressing demand for air travel. Between 2000 and 2002 the air industry GDP decreased by 6.7%.

Different companies reacted in different ways to this slowdown. The most successful sector has been the low-cost carriers, which are generally more flexible and adaptable. They have been able to improve profitability by continuing their aggressive pricing policies, controlling their cost base and exploiting new markets.

Major carriers have been struggling to remain viable. Some of them started to operate their own budget brands. Many airlines responded to the crisis by lowering prices on economy fares (to compete with low cost-carriers) and at the same time increasing business travel rates. From the last quarter of 2000 to the last quarter of 2001 business airfares increased by 10% despite an industry GDP decline of about 12% (Fig.3, Annex A). Airlines have increased business-class fares as a buffer against economic slowdown, knowing that demand for business travel is relatively inelastic when compared with demand for leisure. This is because in the bid to maintain business relationships, firms need to sustain a certain level of business travel, regardless of the economic environment.

As the industry began to recover from the impact of 11th September, war in Iraq and the SARS virus early this year created a worst financial scenario. The International Air Transport Association estimated the SARS outbreak and the war in Iraq cost the global industry about £4bn.

Some airlines reacted by cutting staff, grounding aircraft and reducing schedules; others adopted new marketing strategies by introducing new classes of fares with improved quality of services in the attempt to attract more business travellers. Airline alliances have been looking at initiatives to strengthen co-operation between member carriers to face current difficulties (i.e. joint use of computer reservation systems, codesharing of flights, co-ordinated flight schedules, joint marketing etc).

Given that conditions of uncertainty still persist, these strategies cannot be considered as a long-term solution. In the weak revenue environment, national flag carriers need to restructure their cost base and change outdated working practices to become more efficient.

The International Air Transport Association (IATA) claim that government regulations represent the strongest obstacles to change in the industry and they call for the liberalisation of national ownership and control rules. Many are urging governments to give airlines more freedom to merge, acquire and access the international capital market in order to become more competitive on a global scale.

2. The development of the Corporate Services Price Index (CSPI) for Business Airfares.

2.1. Structure and Outputs

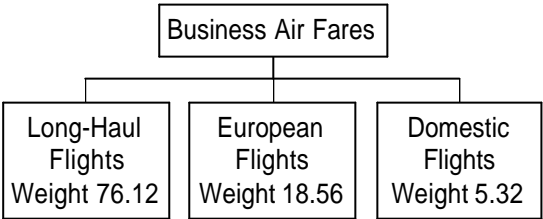
The business airfares index aims to observe movement in prices charged by UK airline companies to UK business passengers (see Annex A for published series).

This index refers to part of the industry classified to 62.10/1 “Scheduled passenger air transport” in the UK’s Standard Industrial Classification of Economic Activities (UK SIC 2003).

This industry includes transport of passengers, both leisure and business passengers, by air over regular routes and on regular schedules. The level of detail in the SIC classification does not allow distinction between passengers according to their purpose of travel.

The development of the index started in 1996. In the initial phase a number of meetings were held with the Retail Price Index (RPI) branch of the ONS, the Civil Aviation Authority (the UK aviation regulatory body) and with a few major UK airlines. It was then decided to adopt the RPI approach² for airfares with the following industrial structure:

Fig.1 Business Air Fares family Tree (Base period: 1995)



Each sub-sector has a weight related to turnover value in the base period (1995) to enable the construction of a standard Laspeyre’s price index.

2.2. Sampling and recruitment

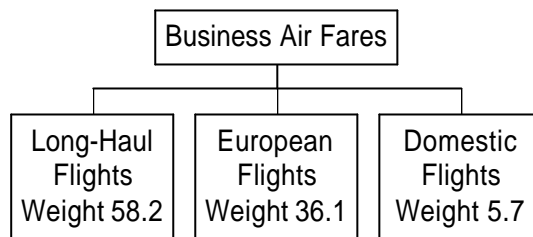
According to the Inter-Departmental Business Register (IDBR), the UK register for business surveys, there are 400 companies classified to the SIC 62.10/1. This includes UK companies and foreign companies with UK based subsidiaries registered for Value Added Tax (VAT). A high proportion of them are small companies providing auxiliary services (i.e. call centres, travel agencies etc.) not relevant for CSPI purposes.

In order to calculate weights for each sub-sector (Long-Haul, European and Domestic) we randomly selected a number of companies from the IDBR database excluding companies with less than 10 employees. Stratification of the sample for recruitment was based on annual turnover. Selected companies were sent a business enquiry form where they were asked to provide a detailed breakdown of domestic sales of services to UK business passengers per each sub-sector.

We are currently in the process of rebasing the industry using year 2000 turnover data:

² See Annex B for the current RPI approach for airfare index.

Fig.2 Business Air Fares family Tree (Base period: 2000)



The ONS currently reassesses the weights every 5 years. Comparing Fig.1 with Fig.2, we can notice that the weight for European flights has almost doubled to the detriment of long-haul flights between 1995 and 2000, while the weight for domestic flight has remained the same. This might be due to: i) an improved quality of data collection and analysis ii) the slowdown of some of the Far East economies (particularly Japan) which negatively effected long-haul flights; iii) an increased interest of UK companies towards EU countries (confirmed by the increased share of UK outward foreign direct investments toward European countries) and iv) an increased availability of European flights due to the presence of low-cost carriers.

2.3. Pricing methodology

CSPI branch collects published business class fares on a quarterly basis from 3 major airlines: British Airways Plc (BA); Virgin Atlantic Airways Ltd; and BMI British Midland. The three companies all together account for approximately 55% of all passengers uplifted by UK airlines on scheduled flights.

We obtain BA fares through the Civil Aviation Authority, whilst Virgin and BMI fares are collected directly from the airline.

In total, the index covers 14 long-haul destinations, 17 European destinations and 9 domestic destinations:

Long-haul flights from London to	European flights from London to	Domestic Flights from London to
BOMBAY	AMSTERDAM	ABERDEEN
BOSTON	BARCELONA	BELFAST
HONG KONG	BRUSSELS	EDINBURGH
JOANNESBURG	COPENHAGEN	GLASGOW
LOS ANGELES	DUBLIN	JERSEY
MIAMI	FRANKFURT	LEEDS
NEW YORK	GENEVA	MANCHESTER
NEWARK	PARIS	NEWCASTLE
ORLANDO	LISBON	TEESSIDE
SINGAPORE	MADRID	
SYDNEY	MILAN	
TOKYO	MUNICH	
TORONTO	NICE	
WASHINGTON	PALMA	
	ROME	
	STOCKHOLM	
	ZURICH	

Routes were selected on the basis of the Civil Aviation Authority data on passenger numbers, without any distinction between business and leisure passengers (this detailed information was not available). It was decided to select all routes above a specific cut-off.

Individual routes were weighted according to estimated expenditure share, multiplying base period fares by the number of passengers per route.

For each route, the appropriate fare for business customers was selected among a range of different class of fares (economies, business, first and concord class). For the majority of routes we selected business class fare, apart from some domestic routes for which only economy fares were available. Each class of fare is available as restricted or unrestricted. It was decided to choose unrestricted business fares, where the price of the ticket is unrelated to booking period and time of the flight. Fares exclude taxes, fees or charges. The sample of fares includes a mix of return and one-way fares.

Every quarter we receive one fare per destination for each of the last three months. When compiling the index we take the average fare for the quarter.

2.4. Limitations and challenges for the future

2.4.1. Collection of data for rebasing

One major problem in the CSPI rebasing project is the absence of reliable data on business travel. With our turnover enquiry we asked airline companies to specify their turnover on sales to business passengers per sub-sector. A large proportion of companies were unable to answer this question for several reasons:

- i) Most sales to business customers rely on travel agents, hence, airline companies are not aware of the percentage of sales per type of customer;
- ii) Even when the airline sells a ticket directly to a passenger no enquiry is made as to what the purpose of travel is. Also, no record is kept of who is providing the funds;
- iii) A small percentage of companies are able to distinguish between revenue from business class tickets and economy tickets. The problem with the use of this data is that business passengers, often, travel in economy class and not only business passengers buy business class tickets.

To inform our rebasing analysis we used data from the International Passenger Survey carried out by the Office for National Statistics on an annual basis. This is a survey of a random sample of passengers entering and leaving UK by air, sea and the Channel Tunnel. Passengers passing through passport control are asked purpose of travel and country of destination (among other questions). From this survey we are able to estimate the percentage of UK business passenger per destination. The problem with the use of this survey is the fact that it excludes passengers travelling between UK airports.

2.4.2. Recruitment of airlines into the sample

The Business Air Fares Index relies exclusively on major carriers. In 1996, when contributors were selected, these companies represented almost the all business travel market. Nowadays, low-cost carriers are growing in importance and some of them claim that business travel represents more than 50% of their revenues. According to American Express, in the face of a slow economic recovery, corporations are increasingly including low-cost carriers in their travel policies.

Excluding low-cost carriers might produce bias. For this reason, in the future review of the index, there is scope for an enlargement of the sample of contributors in order to make it more representative of the current market structure.

2.4.3. Selection of type of fares and pricing methodology

The Business Air Fare Index is mainly based on business class fares, which was representative of 1996 business passenger choice and airline companies fare base.

Because of the increased competition in the air transport industry, airline companies are now offering a wider range of fares. On the other hand, an increasing number of corporations are taking advantage of lower fares, moving to “tactical travel buying” instead of relying on their preferred suppliers’ negotiated rates. In fact, many corporations, in the attempt to reduce

travel costs, rely on business travel management companies who are able to provide the best fare available from all types of fares.

Furthermore, in many companies the class of the ticket is dictated by the status of the employee. Executive teams flying first class and the others flying economy class.

If we consider that changes in economy class and business class prices have had different trends, there is a strong need to investigate with travel agents and airline companies which set of tariffs best represent business passenger purchases.

Another problem with the collection of fares is the fact that changes in airfares reflect, sometimes, quality change in the service such as the introduction of charge for meals, improved seating, introduction of mileage programmes (earning air-mile while using the service). In this respect we need to monitor quality changes and respond on a case-by-case basis.

2.4.4. Selection of routes

Our current approach is based on the collection of prices on a list of fixed destinations. Selection of routes was based on general travel volumes and not specifically on business travel volumes. There is a need to investigate volumes of business passengers per route with airline companies and the Civil Aviation Authority and accordingly reassess weights and update the basket of destinations. It is also worth considering the introduction of new routes not available in 1996 when the list of routes was selected.

Conclusion

In order to improve the quality of the Index for Business Airfares, there is a need for new sources of data to redefine sub-sector and route weights. It is also important to extend the sample of contributors, consider a broader range of fares and update the basket of destinations. These improvements are required to make the index more representative of the current state of the industry.

In order to collect relevant information we are planning to meet major business travel management companies, the Civil Aviation Authority and some major airline companies.

We are also considering changing the collection methodology and adopt the RPI approach which is based on the collection of fares directly from the Internet³. For our purposes the best practice would be to maintain a fixed selection of routes, instead of randomly selecting them as for RPI (this is to ensure that routes are representative of business traffic). This method could allow us for more flexibility and control.

An alternative strategy, currently under consideration, is the adoption of the “European Corporate Travel Index” provided by American Express. This index monitors changes in published airfares from 59 Western European cities to 10 geographical regions world-wide and is calculated at three geographical levels: country, regional and global. It observes a

³ See Annex B

constant set of fares (8 different fare types) on a quarterly basis. Fares quoted are prices for return flights from Western European cities.

The adoption of this index could have a number of advantages. We could benefit from the expertise and specialist knowledge of American Express team, minimise the burden on contributors and at the same time concentrate resources into other areas. There is scope for an investigation of this index to see if it meets CSPI requirements and to see if its adoption is cost effective.

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Annex A

Tab.1 Corporate Services Price Index (1995=100) Business Air Fares

	Business Air Fares	Experimental top-level CSPI
1995 Q1	..	99.6
Q2	..	100.0
Q3	..	100.0
Q4	..	100.4
1996 Q1	101.4	100.7
Q2	101.8	101.6
Q3	101.8	101.9
Q4	108.5	103.3
1997 Q1	112.7	104.5
Q2	113.7	105.3
Q3	116.6	105.9
Q4	117.3	106.3
1998 Q1	119.8	107.3
Q2	124.2	108.3
Q3	124.9	108.8
Q4	125.1	109.3
1999 Q1	125.4	110.4
Q2	127.5	111.3
Q3	127.7	112.2
Q4	128.3	113.1
2000 Q1	129.5	113.9
Q2	132.4	115.6
Q3	135.9	116.9
Q4	143.3	118.3
2001 Q1	150.3	120.0
Q2	150.8	121.4
Q3	154.9	122.3
Q4	157.9	123.0
2002 Q1	161.4	123.4
Q2	162.0	124.3
Q3	163.2	124.8
Q4	164.3	125.5
2003 Q1	165.1	126.4
Q2	166.7	128.3

Fig 1

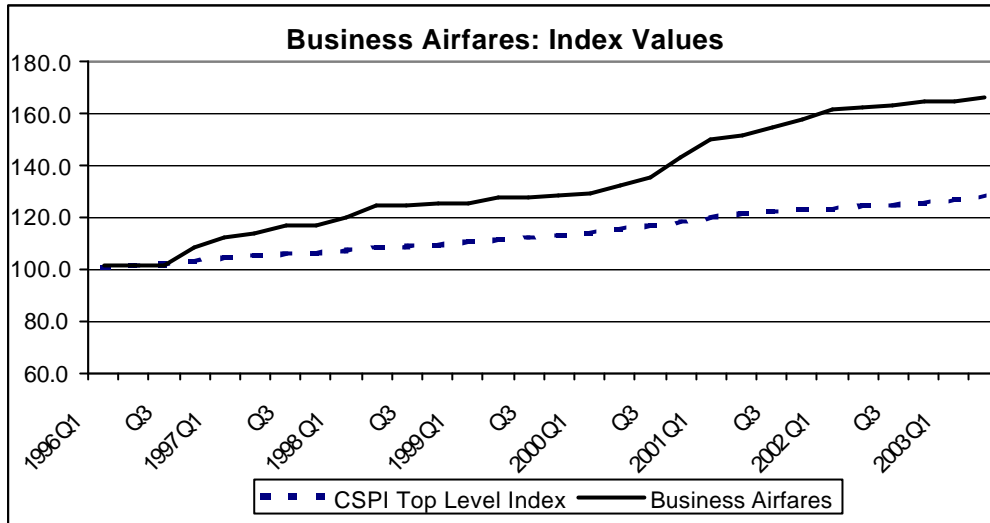


Fig 2

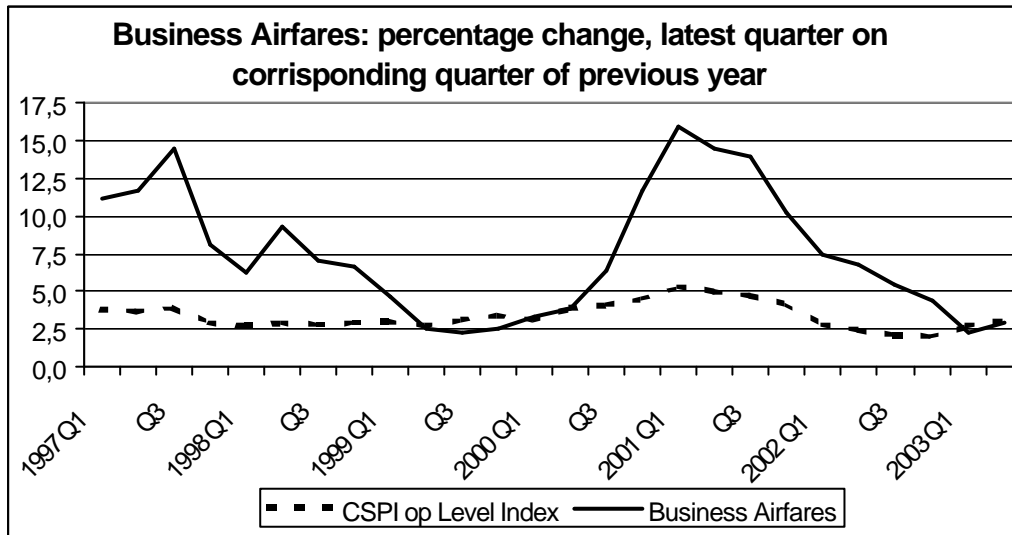
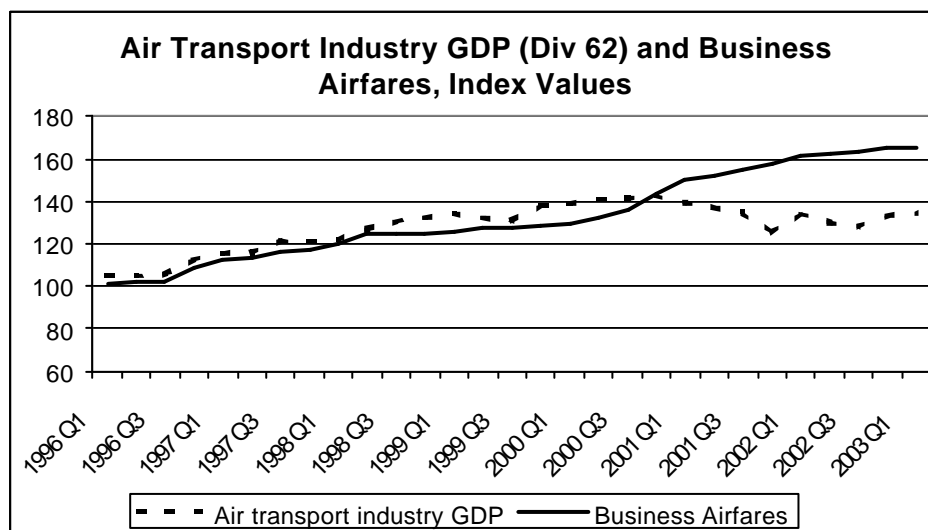


Fig 3



Annex B

UK Retail Prices (Consumer Prices) Index, current approach for airfares

The key features of the airfares index are as follows:

- i) Changes in the price of airfares are recorded in the index in the month in which the flight departs, not when the ticket is bought (a similar approach to holiday prices)
- ii) Prices are compared against January base prices, like most other RPI indices
- iii) Separate sub-indices are compiled for domestic, short-haul (European) and long-haul flights
- iv) Prices are collected for return flights at various periodicities in advance of departure, reflecting usual consumer behaviour

The sample of destinations is selected in line with their relative importance based on expenditure data derived from the International Passenger Survey (IPS), for international flights, and the Civil Aviation Authority (CAA), for domestic flights.

Prices are collected over the Internet, from the web sites of airlines and on-line travel agents. The prices recorded include the on-line price and, where appropriate, the cost of paying or booking offline if this different. The sample covers economy class fares on both low-cost and mainstream airlines. The airlines chosen are those with a departure flight closest to a pre-specified time on a particular day on randomly selected routes. The return flight is a pre-specified number of days later. Some flexibility is allowed to vary these details, if the prices collected are unreasonably high (e.g. because the flight is booked out), by choosing an alternative flight, operated by a carrier of similar quality, or departing at a slightly different time of day, or on the day preceding or following. Only scheduled flights are priced, because they account for by far the greater proportion of independent travel. The majority of travel on charter flights is undertaken as part of a package holiday, which is included in the foreign holidays index.

Prices for long haul flights are collected 6, 3 and 1 months in advance of departure dates; short haul prices are collected 3 and 1 months in advance; and domestic prices are collected 1 month in advance. Separate indices are calculated for each advance booking period for each of the three sub indices, with individual routes weighted according to expenditure share. The short-haul 3 and 1 month indices are given equal weights in deriving the overall short-haul index while the 6, 3 and 1 month long-haul indices are weighted together in the proportions 45: 45: 10. An overall index for international flights is calculated by weighting the short-haul and long-haul indices in line with IPS expenditure data. Finally, the overall index is obtained by weighting the domestic and international indices in line with EFS expenditure data.