


ACCOMMODATION

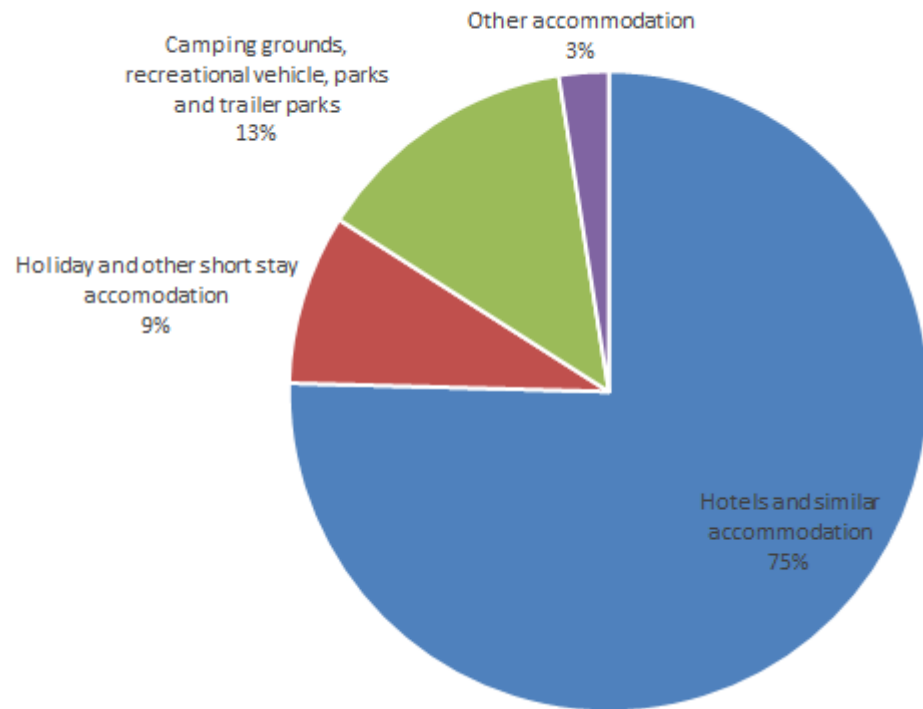
Industry overview

- Provision of short-term accommodation to visitors and other travellers
 - Hotel, motel, guest-houses, holiday homes and bed and breakfast
 - Camping grounds, caravan parks
 - Dormitories for students, migrants and seasonal workers
- Highly segmented market
 - Economy to luxury range
 - Type of customers
 - Type of rooms
- Higher income elasticity of demand
- Ever growing importance of IT tools and internet sales

UK industry

- Accommodation services contributed around £15.8 billions to the UK economy in 2017 (equivalent to 1.3%)
- Around 17,000 enterprises are active in this sector (0.7% of UK businesses)
- Around 450,000 people are working in this sector (1.5% of total UK employment)

Accommodation services, 2017, percentage of GVA



Price determinants

- Room price depends on:
 - Period
 - Room characteristics – size, floor, room service etc
 - Hotel characteristics (star rating, location, amenities)
 - Number/type of guests
 - Stay duration
 - Rate of occupancy
 - Level of market competition
 - Number of employees

Pricing mechanism

- High labour costs due to high labour intensity and low labour productivity – high fixed costs
- Two pricing mechanisms: traditional versus dynamic pricing
- Traditional pricing
 - Covering fixed costs first
 - Prices determined based on price determining factors (period, room type, etc)
 - Prices DO NOT change based on real-time demand

Dynamic pricing and revenue management

- New and increasingly common pricing mechanism
- Facilitated by widespread use of reservation management IT tools and electronic sales
- Room rates DO change based on real-time demand
- Different rates for different market segment for different sales channels
- Managed through revenue management systems
 - Price control
 - Revenue flow control
 - Distribution channel control
 - Marketing activities
 - Financial operations
- Revenue management applies when:
 1. Fixed amount of resources available for sale
 2. Time-limited services
 3. Different customers willing to pay different prices

Main RM-based pricing mechanisms

- Required Rate of Return: room rates cover fixed costs+profit to meet ROI
- Relative Room Size: estimation of rate per square meter to meet revenue targets
- Revenue per available room: balance between occupancy rates and average room rates

Additional price adjustments mechanisms

- Loss leader
- Going-rate pricing
- Prestige pricing
- Bundle pricing
- Volume discount
- Last minute pricing
- Price lining
- Discounts based on place

Industry classifications

ISIC Rev.4							
I		Accommodation and food service activities					
55		Accommodation					
ISIC Rev.4		NACE Rev.2		2007 NAICS		ANZSIC	
5510	<i>Short term accommodation activities</i>	55.10	Hotels and similar accommodation	721110	Part of: Hotels (except Casino Hotels) and Motels except separate operation of sleeping car services Part of: Casino Hotels (hotel as plurality of revenue) Bed-and-Breakfast Inns All Other Traveler Accommodation	4400p	Accommodation
				721120			
		55.20	Holiday and other short-stay accommodation	721191			
				721199			
5520	<i>Camping grounds, recreational vehicle parks and trailer parks</i>	55.30	Camping grounds, recreational vehicle parks and trailer parks	721211	RV (Recreational Vehicle) Parks and Campgrounds Recreational and Vacation Camps (except Campgrounds)	4400p	Accommodation
				721214			
5590	<i>Other accommodation</i>	55.90	Other accommodation	721110	Part of: Hotels (except Casino Hotels) and Motels separate operation of sleeping car services Rooming and Boarding Houses	4400p	Accommodation
				721310			

Source: OECD/Eurostat (2014), *Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services: Second Edition*, OECD Publishing. <http://dx.doi.org/10.1787/9789264220676-en>

Product classification

ISIC Rev. 4					
I		Accommodation and food service activities			
55		Accommodation			
ISIC Rev. 4		CPC Ver.2		CPA 2008	
5510	<i>Short term accommodation activities</i>	63111	Room or unit accommodation services for visitors, with daily housekeeping services	55.10.10	Room or unit accommodation services for visitors, with daily housekeeping (except time-share)
		63112	Room or unit accommodation services for visitors, without daily housekeeping services	55.20.19	Other room or unit accommodation services for visitors, without daily housekeeping
		63113	Room or unit accommodation services for visitors, in time-share properties	55.20.12	Room or unit accommodation services for visitors in time-share properties
		63114	Accommodation services for visitors, in rooms for multiple occupancy	55.20.11	Room or unit accommodation services for visitors in youth hostels and holiday cabins
5520	<i>Camping grounds, recreational vehicle parks and trailer parks</i>	63120	Camp site services	55.30.11	Camping ground services
		63130	Recreational and vacation camp services	55.30.12	Recreational vehicle park and trailer park services
5590	<i>Other accommodation</i>	63210	Room or unit accommodation services for students in student residences	55.90.11	Room or unit accommodation services for students in student residences and school dormitories
		63220	Room or unit accommodation services for workers in workers hostels or camps	55.90.12	Room or unit accommodation services for workers in workers hostels or camps
		63290	Other room or unit accommodation services n.e.c.	55.90.13 55.90.19	Sleeping car and similar services in other transport media Other accommodation services n.e.c.

Source: OECD/Eurostat (2014), *Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services: Second Edition*, OECD Publishing. <http://dx.doi.org/10.1787/9789264220676-en>

Key classification considerations

- Industry or product classification?
- Full SPPI or CPI?

CPI vs SPPI

- Significant importance of both business and household users of accommodation activity
- Household activity captured extensively within CPI
- Several options to obtain an overall SPPI accommodation index:
 - Run dedicated SPPI covering all users
 - Run a more limited SPPI (covering business users) to use alongside CPI data for household
 - Obtain information for business users as part of the CPI data collection
- Limited number of country produce their own SPPI, more reliance on CPI data

UK experience

- In the UK, dedicated SPPI to capture the more B2B services provided by the accommodation industry
 - Conference room hire
 - Daily delegate rates
 - Bedrooms (business rates)
 - 24 hours business rates
- “Licensed hotels and motels with restaurants. Business customer”
 - London
 - Outside London

Sample design

- Market structure and output requirements to inform design
- Probability sampling is recommended; mixture of random and non probability sample can be considered
- Probability Proportional to Size (PPS) using room revenue
- Stratification by region, size or other key characteristics to improve sample efficiency
- In the UK, data collection split between London and rest of the UK

Specification of service

- Paramount collecting prices at constant quality
- Several factors impacting room prices
- Representative service selected considering:
 - Type of room
 - Number of guests
 - Type of guests
 - Period of occupancy (weekdays/weekends)
 - Date and length of stay
 - Location
 - Additional services included

Service specification

- Service 1: daily delegate rate provided outside London
 - Room hire
 - Refreshments (tea, coffee and biscuits)
 - Audio/visual equipment
- Service 2: 24 hours business rate
 - Lunch
 - Tea/coffee
 - Dinner
 - Bedroom accommodation
 - Breakfast
 - Excludes VAT
- Service 3: conference hire
 - Room only up to 100 people
- Service 4: bedroom accommodation
 - One double bedroom including breakfast

Service specification– additional considerations

- Accommodation prices are very volatile – spot rates
 - Collect average prices over a period time
 - Increase frequency of data collection to improve representativity
- Different prices available via different sales channels
 - Collect prices from multiple sources
 - Collect prices from most representative sale channel
- Prices influenced by special events/public holidays
 - Consider timing data collection to ensure consistency

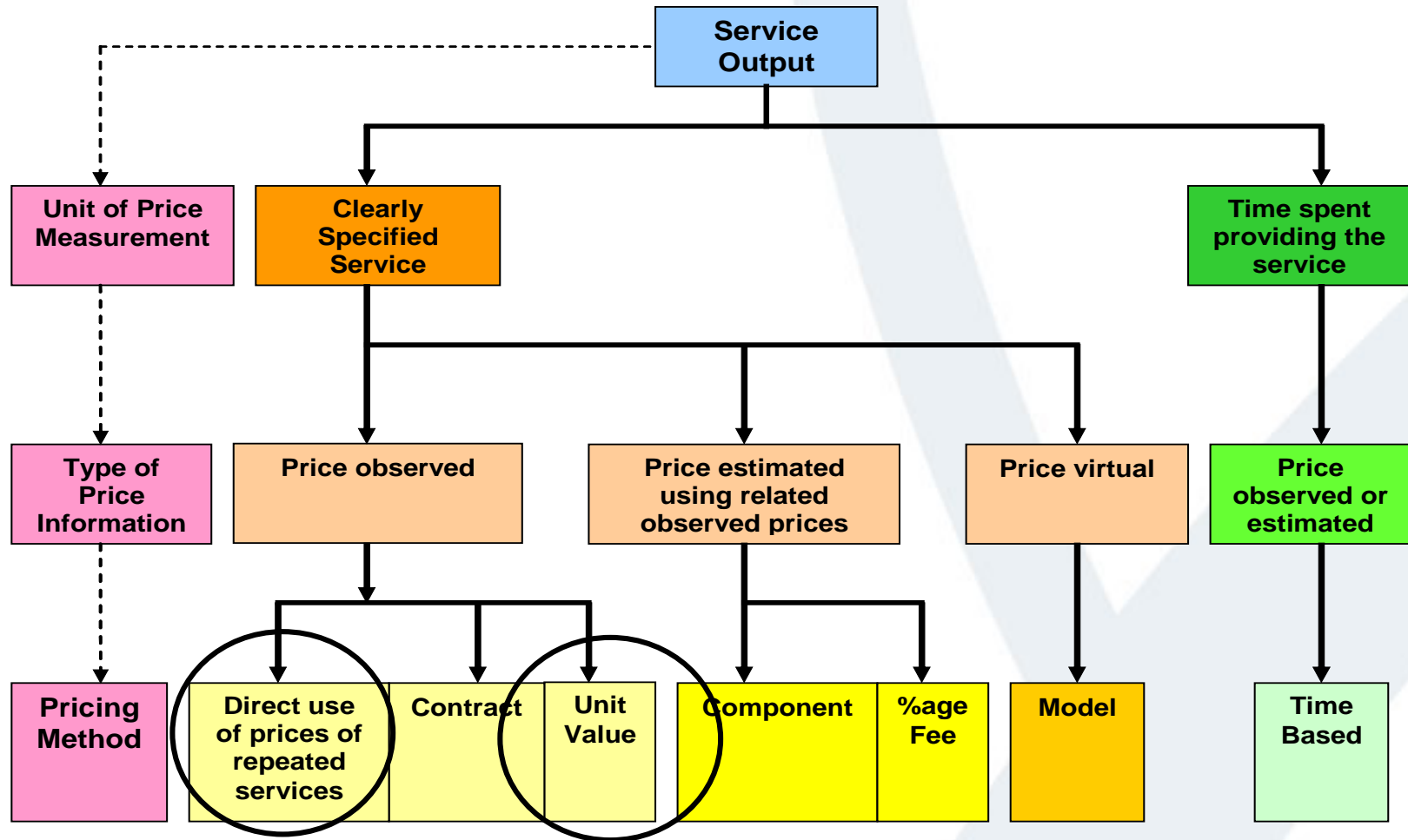
Data collection

- Prices for the same service are obtained on an on-going basis
- Several channels: surveys (mail, telephone, online etc); administrative data, online data collection/web scraping
- For surveys, prices can be obtained from:
 - Individual hotel not part of a chain
 - Head office of an hotel chain
 - Individual hotel belonging to a chain
 - Head office of a chain reporting for individual hotels

Pricing methods

- Direct use of prices of repeated services
- Unit value

Pricing methods: accommodation



Direct use of prices of repeated services

Pros:

- Real transaction prices – list prices no longer representative with dynamic pricing
- Detailed specification of service allows pricing at constant quality and quality adjustment when specification change

Cons:

- Does not cover all representative transactions taking place in an hotel
- Spot prices less representative with dynamic pricing strategies
- If survey used, may miss discount and special offers only available via internet

Unit value

- Average room rate – total hotel revenue divided by number of occupied rooms
- Normally provided by subgroups: i.e. average room rate business guests, etc

Pros

- Address some of the issues with spot prices in the Direct use of prices of repeated services

Cons

- Availability of hotel revenue by type of room/client
- Changes in product-mix over time

UK experience

- UK SPPI generally uses direct use of prices of repeated services or contract prices
- Not specifically prescriptive to respondents on what method to use as long as prices refer to the same type of service as specified during recruitment/validation discussions
- Model prices can be collected if a service has not been provided in the quarter – i.e. a conference room may have been hired out for a wedding
- Between 300 and 400 prices collected from over 100 suppliers

Data validation

- As for other industries, based on unexpected price changes
- Aims at detecting non-genuine price changes
 - Data collection errors
 - Changes in quality
- Validation gates applied on period-on-period growth
 - e.g. validation failures where quarter-on-quarter prices change over a certain threshold (e.g. 7.5%; 15%)
- Validation gates should take into account industry-specific price characteristics:
 - Volatility/price variability
 - Seasonality
- Cases failing validation are contacted by Business data division staff to query large movements

Drivers of price movements

- Seasonality
- Wages
- Very volatile industry, with daily price changes due to supply/demand

Quality adjustments

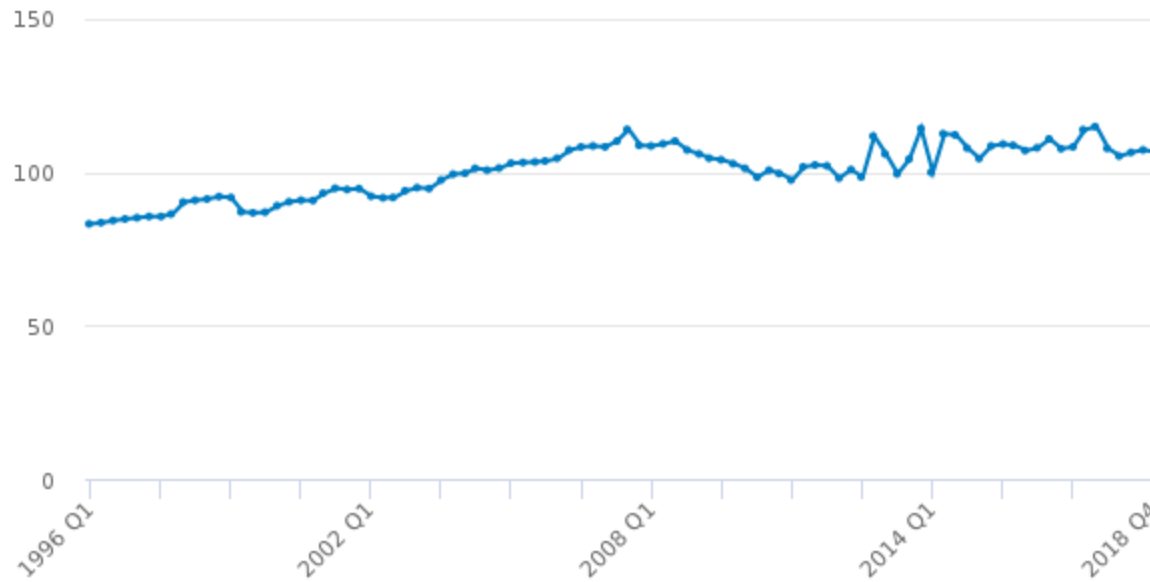
- Rely on detailed specification of the service
- Easier with direct use of prices of repeated services than the unit value method
- Attention to service bundles
- Consideration to price changes due to new services/bundles
- Quality changes due to renovations, room upgrades etc

Weighting

- Target coverage of SPPI – B2B index used alongside CPI or B2all index?
- Product weights should be used – but lack of level of detail in many cases
- Industry-level weights or tourism statistics used to weight SPPI

UK SPPI

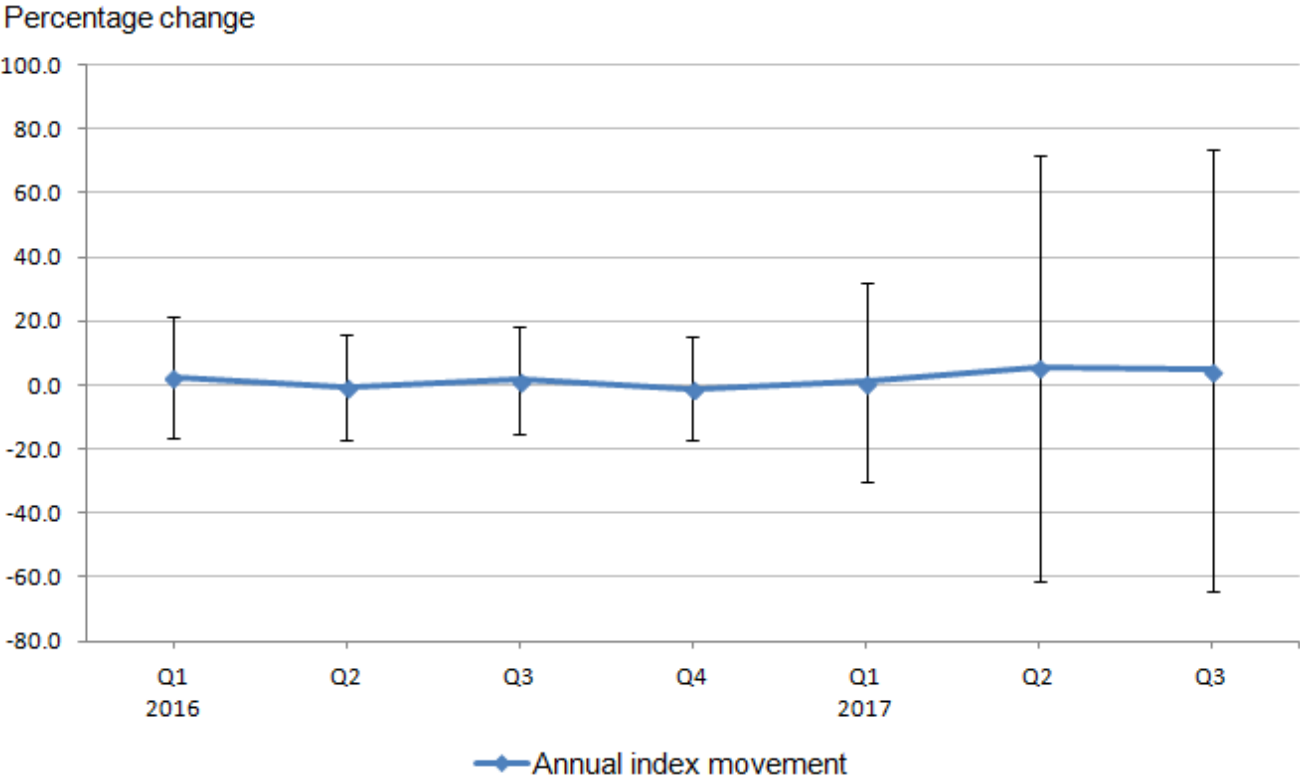
SPPI: 551000000: LICENSED HOTELS AND MOTELS WITH RESTAURANTS. BUSINESS CUSTOMER



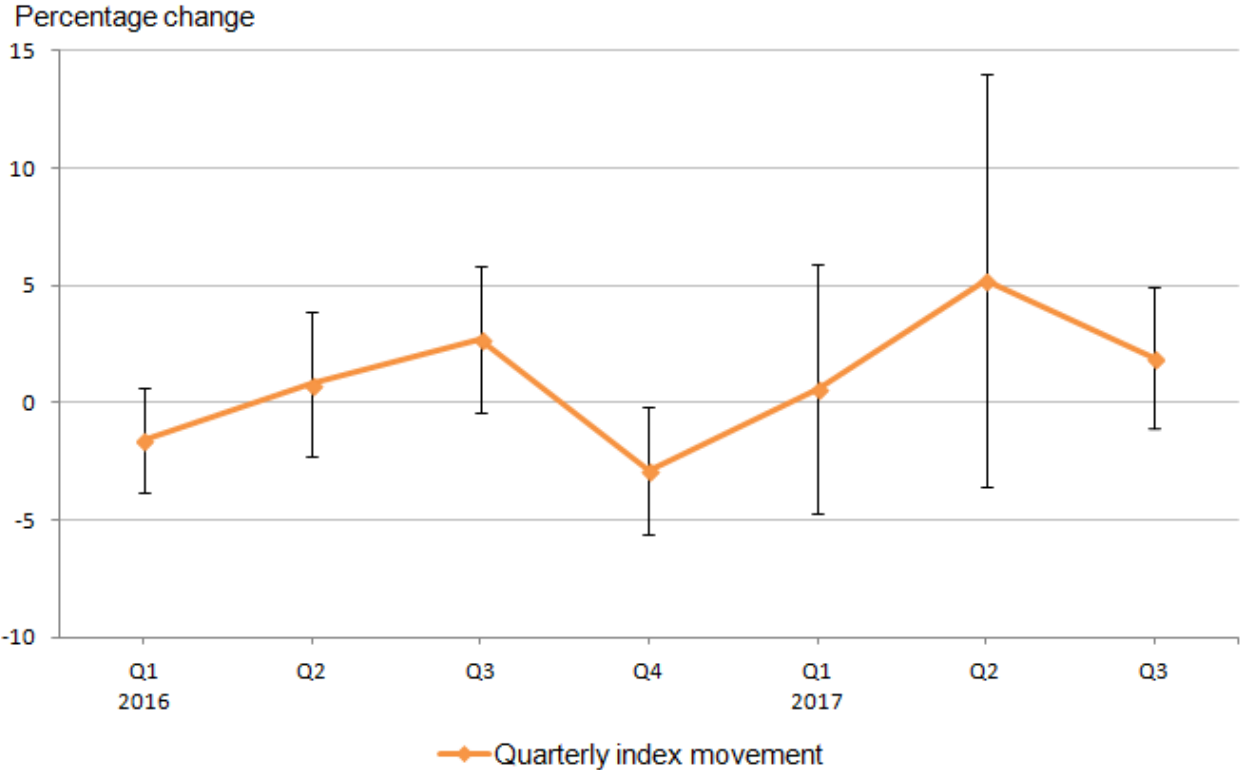
SPPI: 551000000: LICENSED HOTELS AND MOTELS WITH RESTAURANTS. BUSINESS CUSTOMER

Source:

SPPI hotels (business only), annual rate, 95% confidence intervals



SPPI hotels (business only), quarterly rate, 95% confidence intervals





FOOD AND BEVERAGE SERVICES

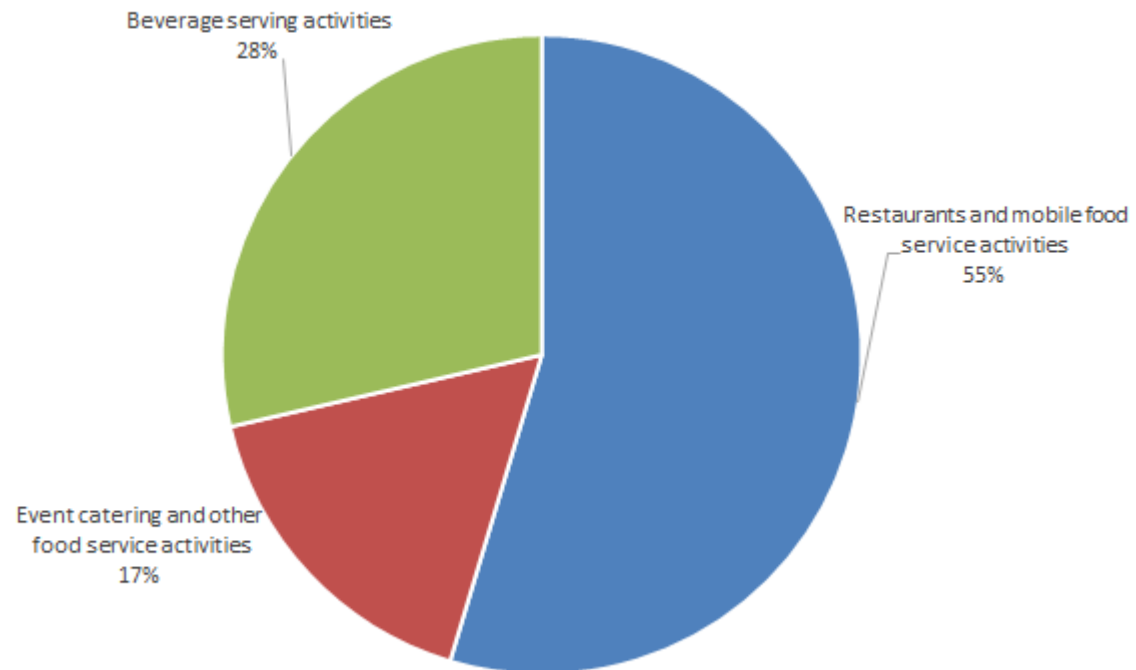
Industry overview

- It comprises provision of meals and drinks:
 - For immediate consumption in bars, restaurant and cafeterias
 - From take-away restaurants
 - By event and industrial catering and canteens
- It is dominated by a large number of micro (<4 employees) and small-sized enterprises (5 to 99 employees)
- Important role also of franchises (eg McDonalds, Starbucks) and large catering companies

UK industry

- Food services contributed around £34.7 billions to the UK economy in 2017 (2.8% of UK non-financial GVA)
- Around 135,000 enterprise are active in this sector (5.6% of UK companies)
- The sector gives work to around £1.8 million people (7.6% of total UK employment)

Food and beverage services, 2017, percentage of GVA



Price determinants

- Factors impacting on food and drinks prices include:
 - Type of meal (e.g. lunch or dinner)
 - Type of drink (e.g. alcoholic versus non-alcoholic)
 - Composition of meal (starters, main, dessert etc)
 - Type of meal selection (e.g. fixed menu, a-la carte, buffet)
 - Ingredients used
 - Service provided (e.g. table service)
 - Characteristics of the establishment (e.g. rating, popularity, location, etc)
 - Market competitors
 - Type of users
 - Number of employees

Pricing mechanism

- High labour costs due to high labour intensity and low labour productivity – high fixed costs
- Prices influenced by commodities inflation (food/drink prices) as well as energy prices
- Traditional pricing
 - Covering fixed costs first and then generate revenue
 - Prices determined based on price determining factors (type of food, drinks, labour costs, etc))
 - Menu prices relatively fixed and not changing over time

Additional pricing strategies

- “Early birds”/”Happy hours” offers
- Coupons and vouchers
- Daily specials

Industry classifications

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I		Accommodation and food service activities					
56		Food and beverage service activities					
ISIC Rev.4		NACE Rev.2		2007 NAICS		ANZSIC	
5610	<i>Restaurants and mobile food service activities</i>	56.10	Restaurants and mobile food service activities	722330	Part of: Mobile Food Services except mobile beverage bars and carts	4511p	Cafes and Restaurants
				722511	Full-Service Restaurants	4512p	Takeaway Food Services
				722513	Limited-Service Restaurants	4513p	Catering Services
				722514	Cafeterias, Grill Buffets, and Buffets	4530p	Clubs (Hospitality)
				722515	Part of: Snack and Nonalcoholic Beverage Bars except nonalcoholic beverage bars	8790p	Other Social Assistance Services
5621	<i>Event catering</i>	56.21	Event catering activities	722320	Caterers	4513p	Catering Services
5629	<i>Other food service activities</i>	56.29	Other food service activities	722310	Food Service Contractors	4511p	Cafes and Restaurants
						4512p	Takeaway Food Services
						4513p	Catering Services
5630	<i>Beverage serving activities</i>	56.30	Beverage serving activities	722330	Part of: Mobile Food Services mobile beverage bars and carts	4511p	Cafes and Restaurants
				722410	Drinking Places (Alcoholic Beverages)	4512p	Takeaway Food Services
				722515	Part of: Snack and Nonalcoholic Beverage Bars nonalcoholic beverage bars	4520	Pubs, Taverns and Bars
4530p	Clubs (Hospitality)						

Source: OECD/Eurostat (2014), *Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services: Second Edition*, OECD Publishing. <http://dx.doi.org/10.1787/9789264220676-en>

Product classification

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56		Food and beverage service activities			
ISIC Rev. 4		CPC Ver.2		CPA 2008	
5610	<i>Restaurants and mobile food service activities</i>	63310	Meal serving services with full restaurant services	56.10.11	Meal serving services with full restaurant service
		63320	Meal serving services with limited services	56.10.12	Meal serving services in railway dining cars and on ships
		63399	Other food serving services	56.10.13	Meal serving services in self-service establishments
5621	<i>Event catering</i>	63391	Event catering services	56.10.19	Other meal serving services
				56.21.11	Event catering services for private households
5629	<i>Other food service activities</i>	63392	Contract food services for transportation operators	56.21.19	Other event catering services
		63393	Other contract food services	56.29.11	Contract food services for transportation operators
5630	<i>Beverage serving activities</i>	63400	Beverage serving services	56.29.19	Other contract food services
				56.29.20	Canteen services
				56.30.10	Beverage serving services

Source: OECD/Eurostat (2014), *Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services: Second Edition*, OECD Publishing. <http://dx.doi.org/10.1787/9789264220676-en>

Key classification considerations

- Industry or product classification?
- Full SPPI or CPI?

Scope of survey – B2B versus B2all/1

- Few countries have a separate SPPI for Food activities, normally covered using CPI
- Large part of food services output goes to household final demand; SPPI development has focussed on Business to Business activities
- Two main areas to consider:
 - Restaurants , mobile food and beverage activities.
 - B2All activity, with little differentiation in prices for business and household consumers.
 - Event catering and other food service activities
 - Event catering aimed at both business and household users
 - Canteen, cafeteria for offices etc cover mainly B2B activities

Scope of survey – B2B versus B2all/2

- Restaurants , mobile food and beverage activities.
 - SPPI on a B2all basis
 - Use CPI as proxy for PPI
- Event catering and other food service activities
 - SPPI on a B2all basis, capturing separate prices for households and business-to-business activities such as canteen, etc
 - SPPI on a B2B basis for the business to business component, complemented by CPI data for the B2C component

UK experience

- Dedicated SPPI to capture the more B2B services of the food industry
- Dedicated SPPI to cover CPA 56.20 – Event catering and Other Food Services
- This covers “Canteens and catering services”
 - Canteens
 - Industrial and office
 - State education
 - Healthcare
 - Catering services

Sample design

- Market structure and output requirements to inform design
- Probability sampling is recommended; mixture of random and non probability sample can be considered
- Probability Proportional to Size (PPS) using units' revenue
- Stratification by region, size or other key characteristics to improve sample efficiency

Service specification

Restaurant, mobile food and beverage serving activities

- Type of meal or drink
- Number of courses
- Basis of meal selection
- Any additional provisions

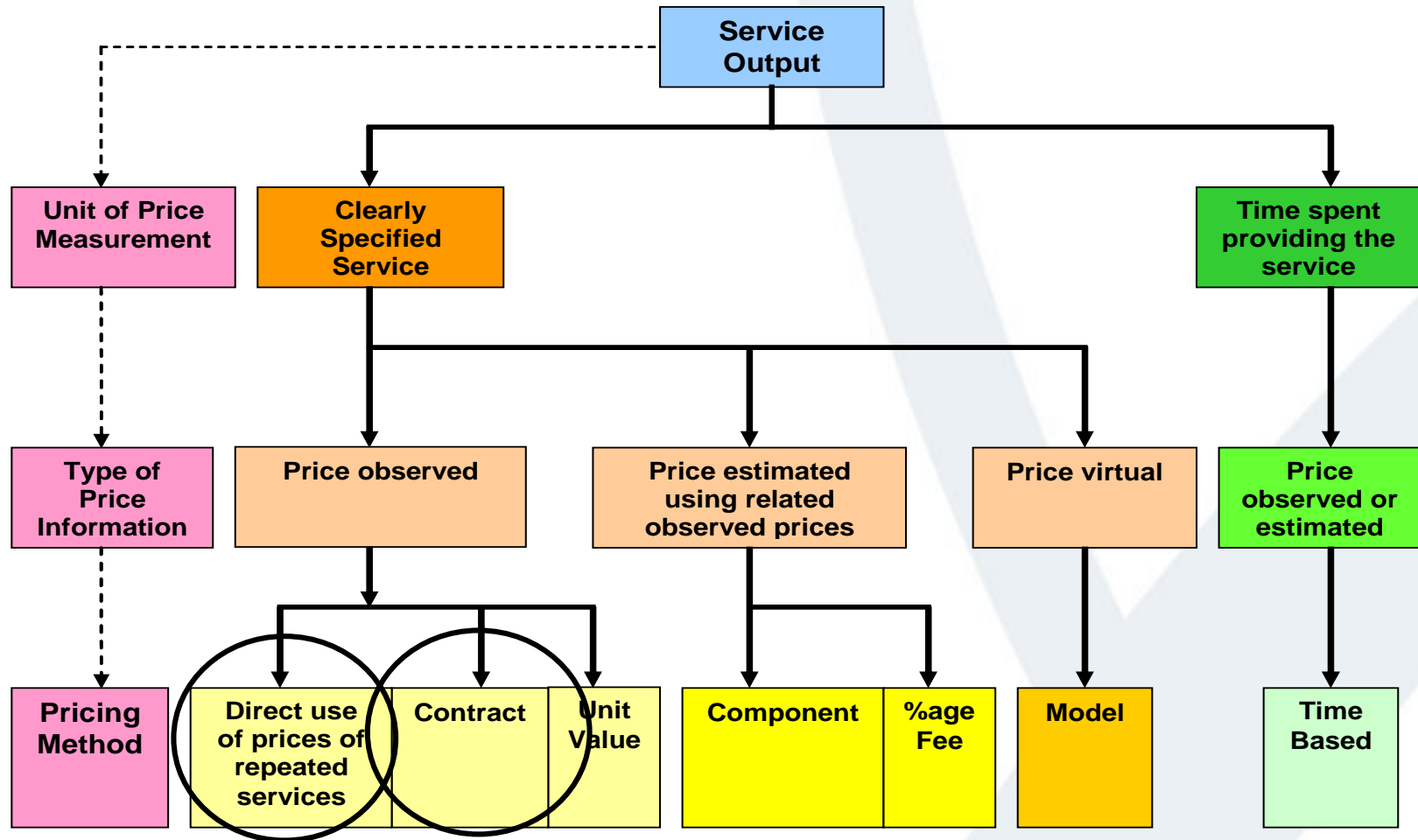
Event catering and other food service activities

- Types of end users (households, businesses – schools, hospital etc)
- Number of people the meal is provided for
- Number of staff working in the catering event/canteen
- Duration of contract
- Other services provided (e.g. cleaning, vending machines etc)

Examples of service specification

- Service 1
 - 3 course hot lunch for corporate function
 - Excludes drinks
 - Standard equipment
 - Silver service for 40 people
 - Includes 5 staff
 - Price per head
- Service 2: canteen, industrial and office
 - Café and restaurant for 500 employees
 - Fixed subsidy contract
 - Price per month

Pricing methods: food and beverage



Direct use of prices of repeated services

Pros

- Can use real transaction prices or list/menu prices
- Avoid pitfalls of unit value methods (i.e. price per person, average bill price) which can suffer from changes in product-mix

Cons

- May miss discounts under special promotions, coupons etc

Contract pricing

- Can be used for event catering, industrial catering, canteens, etc where services are provided on a concession basis, with contracts covering a period of time (e.g. a few years)
- Easy to distinguish pure price change from quality changes when contract is renewed/renegotiated

UK index

- Canteens index mainly uses contract pricing method to capture B2B transactions only
- Catering services uses more often the prices of repeated services method

Data validation

- As for other industries, based on unexpected price changes
- Aims at detecting non-genuine price changes
 - Data collection errors
 - Changes in quality
- Validation gates applied on period-on-period growth
 - e.g. validation failures where quarter-on-quarter prices change over a certain threshold (e.g. 7.5%; 15%)
- Validation gates should take into account industry-specific price characteristics:
 - Volatility/price variability
 - Seasonality
- Cases failing validation are contacted by Business data division staff to query large movements

Drivers of price movements

- Relatively stable industry
- Wages
- Cost of ingredients
- Supply/demand

Quality adjustments

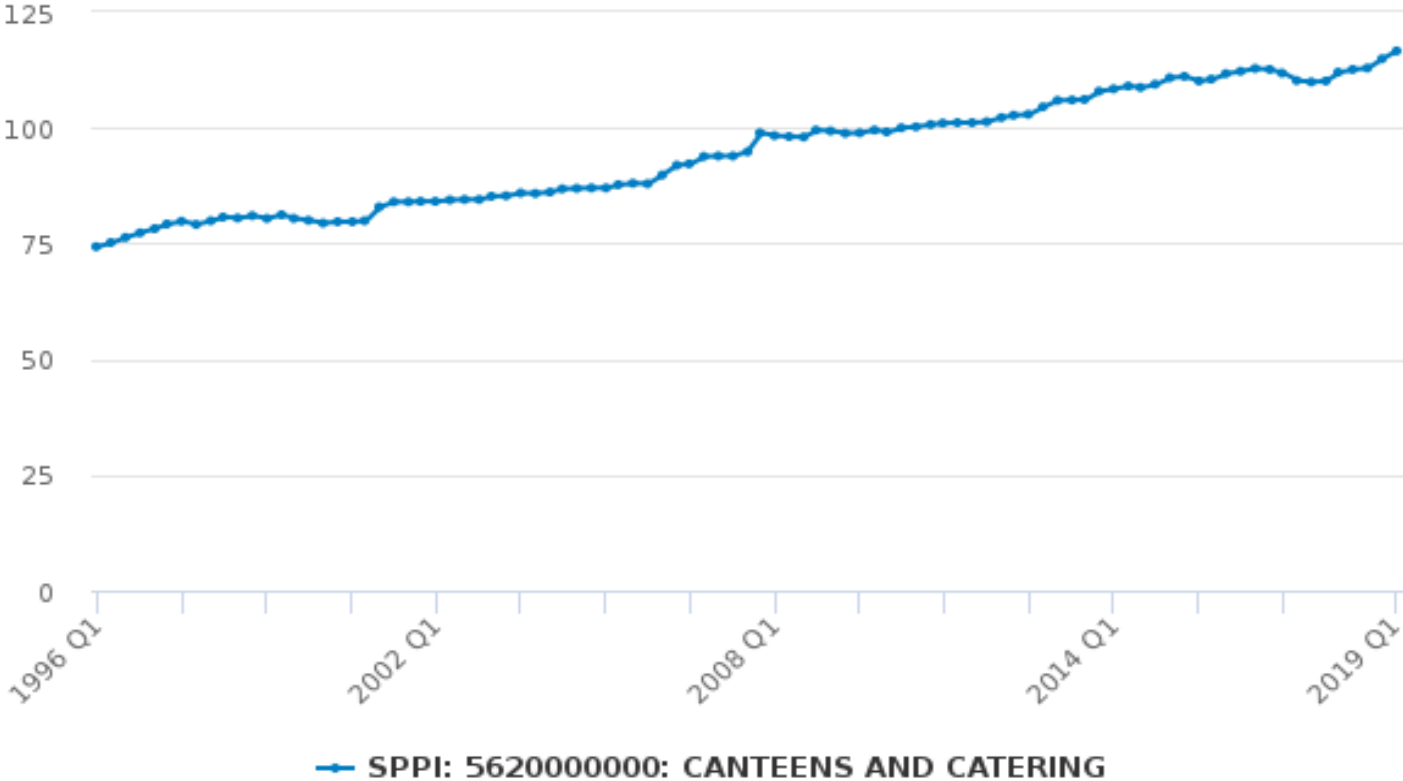
- Mainly use explicit methods
- Judgmental methods are often used when size/components of meals are changed
- Often hard to provide monetary value associated to change in quality
- Trading days may impact on price – easier to quantify and adjust for

Weighting and aggregation

- Product level aggregation is desirable
- A B2all aggregation can be appropriate, if pricing dynamics and expenditure are similar between households and businesses. Otherwise consideration to be given to differences between end-users
- However product and/or end-user level weights may not be easily available

UK SPPI

SPPI: 5620000000: CANTEENS AND CATERING



Source:

Group discussion

Group A: Accommodation

Group B: Food

- What do you know about this industry?
- How important is this industry in your country?
- Is there any specific national characteristics to this industry (e.g. specific regulation, market conditions etc)?
- What do you think are the main drivers of prices in this industry?

Sources

- OECD/Eurostat (2014), *Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services: Second Edition*, OECD Publishing. <http://dx.doi.org/10.1787/9789264220676-en>
- ONS, SPPI methods and guidance, <http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/sppi/sppi-methods-and-guidance---march-2014.pdf>
- ONS, SPPI standard errors <https://www.ons.gov.uk/economy/inflationandpriceindices/articles/uk-servicesproducerpriceindexspapistandarderrors/2016to2017>
- Ahnert, Henning; Kenny, Geoff (2004) : Quality adjustment of European price statistics and the role for hedonics, ECB Occasional Paper, No. 15, European Central Bank (ECB), Frankfurt a. M.
- <http://www.shippopedia.com/ships/ship-types/bulker/>