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Mini Presentation

**Services Producer Price Index for Accommodation and Food  
Services in Ireland**

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## **Preface**

The Central Statistics Office (CSO) does not currently compile an SPPI for the Accommodation and Food Services Sector as it lies outside the scope of the limited range of service industries as set by European regulation. This paper explores how the CSO might compile a partial or derived index for the sector while at the same time keeping costs and respondent burden to a minimum. It does not therefore follow the recommended template for mini presentations.

### **1. Definition of the service being collected**

In the Statistical Classification of Economic Activities in the European Community (NACE Rev. 2) Section I, Accommodation and Food Services, includes the provision for short-stay accommodation for visitors and travellers and the provision of complete meals and drinks fit for immediate consumption.

The sector excludes the provision of long-term accommodation as primary residences (real estate activities), the preparation of food or drinks that are not fit for immediate consumption (manufacturing) or sold through independent distribution channels (wholesale or retail trade).

The classification is structured as follows:

<b>I</b>	<b>ACCOMMODATION AND FOOD SERVICE ACTIVITIES</b>
55	Accommodation
55.1	Hotels and similar accommodation
55.2	Holiday and other short-stay accommodation
55.3	Camping grounds, recreational vehicle parks and trailer parks
55.9	Other accommodation
56	Food and beverage service activities
56.1	Restaurants and mobile food service activities
56.2	Event catering and other food service activities
56.21	Event catering activities
56.29	Other food service activities
56.3	Beverage serving activities

The corresponding section under NACE 1.1 was H, Hotels and Restaurants. Given that NACE Rev.2 is relatively new and as latest data currently available for the main elements of Irish turnover statistics are still classified according to NACE 1.1 it is appropriate to compare the two versions.

The most important difference between the classifications is the separation of Food and beverage service activities from Accommodation at the 2 digit level. Under Accommodation services there is a new group at 55.2 for Holiday and other short-stay accommodation, such as holiday homes, flats and hostels, without daily services such as cleaning and bed making. Under Food and beverage service activities the Nace 1.1 classification of canteens (55.51) has been included under Other food service activities (56.29 under NACE Rev.2) along with activities of food service contractors and food concessions.

Table 1: Classification of NACE 55 and 56 at NACE Rev.2 correspondence to NACE 1.1

<b>NACE Rev.2</b>	<b>NACE 1.1</b>
<b>I</b>	<b>H</b>
<b>55 Accommodation</b>	<b>55 Hotels and restaurants</b>
55.1 Hotels and similar accommodation	55.1 Hotels
55.2 Holiday and other short-stay accommodation	55.21 Youth hostels and mountain refuges
	55.23 Other provision of lodgings n.e.c.
55.3 Camping grounds, recreational vehicle parks and trailer parks	55.21 Youth hostels and mountain refuges
	55.22 Camping sites, including caravan sites
55.9 Other accommodation	55.23 Other provision of lodgings n.e.c.
<b>56 Food and beverage service activities</b>	
56.1 Restaurants and mobile food service activities	55.3 Restaurants
56.2 Event catering and other food service activities	55.5 Canteens and Catering
56.21 Event catering activities	55.52 Catering
56.29 Other food service activities	55.51 Canteens
	55.52 Catering
56.3 Beverage serving activities	55.4 Bars

## 2. Burden

In 2007, the EU agreed a target of reducing administrative burden by 25% by 2012; this target was subsequently adopted by the Irish government. In its *Statement of Strategy 2008-2010*, the CSO identified as a corporate priority the minimising of response burden on CSO inquiry respondents. Consequently surveys of business enterprises are, for the most part, limited to what is required under EU legislation and this along with resource pressures is a significant impediment to expanding the coverage of the SPPI.

However the response burden for the food and accommodation services sector is low compared to some other business sectors. Overall, the time taken to complete returns per unit of business population was almost 55 minutes in 2008 (derived from total number of minutes taken to complete returns for the 23 surveys divided by the population of business enterprises) while the time for the Hotel and food services sector was much lower on 21 minutes (see Table 3 below). Although enterprises could receive a maximum of 86 forms from 23 surveys in 2008 the average

number received in the services sector was 1.2 compared to 5.5 in the industry sector. While this might provide some scope for further sampling of the Hotel and food services sector the resultant increase in overall burden could not be ignored.

*Table 2: Time taken to complete CSO surveys per unit of business population, 2008*

<b>Sector</b>	<b>No. of Minutes</b>
Wholesale and retail trade	143.9
Hotels and food services	21.0
Transport, storage and communication	19.5
Real estate, renting and business activities	15.7
Other community, social and personal services	14.3
<b>All Sectors</b>	<b>54.5</b>

The CSO has in recent years begun to explore the possibility of further reducing burden by supplementing data collection by means of survey with administrative data generated from the Irish taxation system. However as the rate of VAT charged for holiday accommodation and restaurant services is the same at 13.5% (and shared with certain other goods and services such as building services, newspapers, magazines and periodicals, repair, cleaning and maintenance services) it is not possible to identify turnover generated at product level. Furthermore, the requirements for submission of VAT returns varies from enterprise to enterprise and can, at the discretion of the Revenue Commissioners, be on a monthly, quarterly, biannual or annual basis. This limits the potential for use of such administrative data for short-term turnover statistics.

### **3. Market Conditions and Constraints**

#### **3.1 Non coverage of NACE Rev.2 55.2**

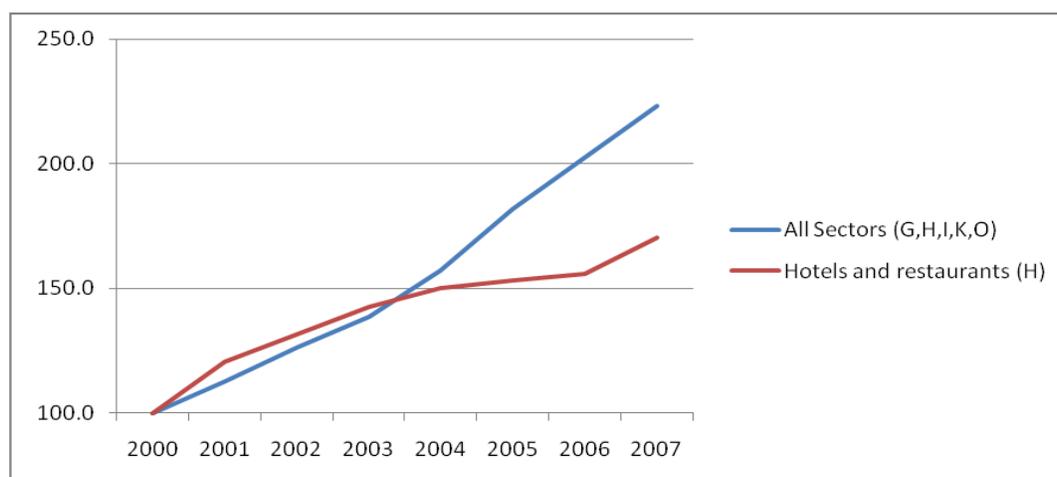
Mandatory registration of accommodation establishments is confined to Hotels only. A sizeable portion of accommodation supply particularly in respect of that classified under 55.2 at NACE Rev.2 (Guesthouses, Bed and Breakfasts) is unregistered. Furthermore the use of administrative data generated by the taxation system is complicated by the fact that provision of holiday or short let accommodation is very often a secondary economic activity for sole traders such as farmers. Therefore it is very difficult to identify, survey and compile statistics on these establishments. Consequently ASI compilers in Ireland do not publish results for this division.

#### **3.2 Size of Sector**

The Accommodation and Food Services sector grew rapidly during the “Celtic Tiger” boom.

Turnover, as measured by the ASI, more than doubled from €4.4billion in 1999 to €9billion in 2007 at current prices. Growth in gross value added was even stronger over the same period, from €1.6billion to €3.7billion, a nominal increase of 124%. The number of enterprises grew from 7,718 to 10,285 representing an increase of 33%. Full-time employees almost doubled from 43,000 to 82,500. Between 2000 and 2003 the rate of annual growth of turnover in the sector matched very closely that of the All Services Sector (Sectors G, H, I, K and O at NACE 1.1). From 2004 the annual rate of growth, although still very strong, fell considerably behind that experienced in the All Services Sector.

*Figure 1: Annual Index of turnover in All Services Sector and Hotels and Restaurants Sector at NACE 1.1 2000=100*



The largest component of the Accommodation and food services sector in respect of both enterprises and turnover in 2007 at NACE Rev.1 was Bars (55.4) accounting for 51% and 39% respectively, while Hotels (55.1) had the greatest share of GVA at 35% (see Table 4 below). Restaurants (55.3) accounted for 26% of turnover while canteen and catering services accounted for just under 6%.

*Table 3: Size of Accommodation and Food Services sectors, 2007 at NACE 1.1*

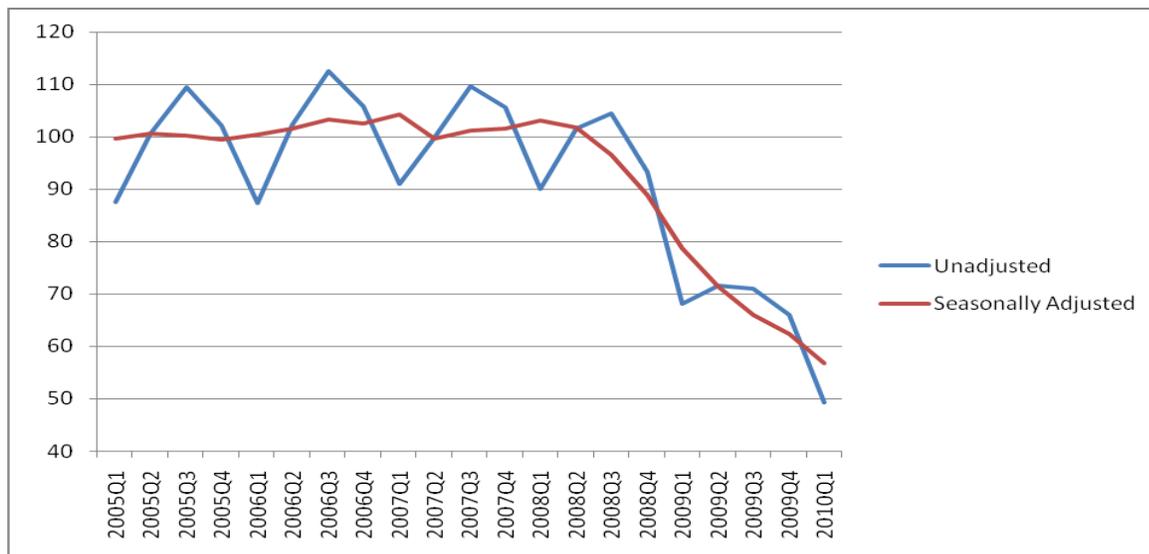
NACE	Enterprises	Turnover €b	GVA €b
<b>Hotels and restaurants (55)</b>	<b>10,285</b>	<b>9</b>	<b>3.7</b>
Hotels (55.1)	808	2.7	1.3
Restaurants (55.3)	3,908	2.3	1
Bars (55.4)	5,211	3.5	1.2
Canteens and catering (55.5)	359	0.5	0.2

### 3.3 Experimental results from the Monthly Turnover Survey

The CSO is currently finalizing results for the monthly turnover index. Monthly data is available from January 2009 and the back series will be extended with quarterly data (previously unpublished) back to Q1 2005 from the Quarterly Services Inquiry.

Experimental results presented in Figure 2 below show the highly seasonal nature of the sector. This makes the accurate estimation of full time equivalents (used in the measure of productivity) by reference to point in time employment estimates very difficult. The results also illustrate vividly the collapse in the Accommodation and food services sector from mid 2008. By the first quarter of 2010 seasonally adjusted turnover for the sector had fallen by over 40% from its peak levels experienced between 2005 and 2007.

*Figure 2: Turnover Index for Accommodation and Food Services Sector, 2005=100 (Experimental) at NACE 1.1*



## 4. A partial SPPI survey or fully derived index

The Irish Services Producer Price Index (SPPI) does not currently cover the Accommodation and food services sector as it lies outside the scope of the limited range of service industries as set by the European Parliament and Council Regulation (EC) No 1165/1998 (consolidated). It is unlikely that the CSO, in the absence of a legislative imperative, will devote sufficient resources for a full SPPI survey of the sector. However the Consumer Price Index (CPI) measures prices for accommodation services and for served food and drinks under COICOP Division 11 and these prices could be used for SPPI purposes.

A partial SPPI survey could be used to generate an index for the Accommodation and food services sector by using prices collected for the CPI as core information and supplementing these with some extra prices (not already covered by the CPI – such as conference/meeting hosting)

and estimates for the split of turnover by product and perhaps customer type (business, personal government). While this SPPI would differ from those produced for other sectors, in respect of both collection of price observations and the grossing methodology employed, the reuse of data collected for the CPI would generate considerable efficiencies.

A derived SPPI could be generated for the sector by using existing data sources only. While such an approach would have a minimal cost in respect of resources and burden it might not be capable of producing an index of sufficient quality.

## **5. Data requirements for an Accommodation and food services sector SPPI**

### **5.1 SPPI Scope**

At present the Irish SPPI, where possible, measures “business to business” prices only as the relevant European regulation requires that prices “cover services delivered to customers that are enterprises or persons representing enterprises”. As a result of the likely constraints on an SPPI for Accommodation and food services a “business to all” index might be more appropriate. Identifying turnover generated from and prices charged to business customers would present considerable challenges.

### **5.2 CSO SPPI methodology**

For most sectors each individual CSO SPPI employs a two stage weighting procedure, firstly within the enterprise and secondly for the sector. For the first stage (within enterprise) price observations for each transaction are assigned to product classifications (usually based on CPA classifications) and each product is weighted according to the proportion of the enterprise’s turnover generated by it. This requires that in addition to the quarterly prices respondents also supply, for a base year, estimates of the proportions of turnover generated by products at the level of CPA classification. The second stage of aggregation requires that respondents provide the size of annual turnover for the base year. The total turnover generated by the sector in the base year is also required and this is provided by the Annual Services Inquiry (ASI).

Given the constraints in developing a dedicated SPPI for the sector (i.e. not legally required, respondent burden, resources) a “derived” SPPI would deviate from the usual methodology. Instead indices for each of the products would be aggregated together to form an overall index for the sector. This aggregation would be based on the proportion of total turnover for the sector (rather than individual enterprises) generated by each of the products.

### **5.3 Consumer Price Index**

The Consumer Price Index is designed to measure the change in the average level of prices (inclusive of all indirect taxes) paid for consumer goods and services by all private households in the country and by foreign tourists holidaying in Ireland. Over 50,000 prices are collected for a representative basket consisting of 616 headings which cover over 1,000 different items in a fixed panel of retail and service outlets throughout the country during the week containing the second Tuesday of each month.

The CPI measures in index form the monthly changes in the cost of purchasing a fixed representative 'basket' of consumer goods and services (i.e. Laspeyres formula). The representative share of each item in this basket is proportional to the average amount purchased by all households in the country as determined by the Household Budget Survey and by foreign tourists in this country using estimates of expenditure by tourists across a range of consumer goods and services. Individual items typically purchased by foreign tourists while holidaying in Ireland such as hotel accommodation and meals out have been adjusted to take account of the additional tourist expenditure. Identical items are priced in the same outlet on each occasion so that changes in the cost of this constant basket reflect only pure price changes.

#### **5.4 CPI Price Observations**

Pricing for COICOP 11 in the Irish CPI covers food and drink served in hotels, restaurants, licensed premises and accommodation services according to the following classifications;

- 11.1 Catering services includes food and drink served in hotels, restaurants including canteens and licensed premises.
  - 11.1.1 Restaurants, hotels, cafes & licensed premises including food and drink served in hotels, restaurants and licensed premises.
    - 11.1.11 Beer in licensed premises includes stout and lager.
    - 11.1.12 Spirits in licensed premises includes whiskey, brandy, vodka and flavoured alcoholic beverages.
    - 11.1.13 Wine and cider in licensed premises includes small bottle of wine and cider.
    - 11.1.14 Soft drinks and water – mineral/mixer
    - 11.1.15 Restaurants, cafes and fast food covering food served in hotels, restaurants, licensed premises and rail dining car.
  - 11.1.2 Canteens - food served in canteens only.
- 11.2 Accommodation Services includes accommodation in Hotels, Guesthouses and Bed & Breakfasts and Hostels.

An examination of Table 4 (overleaf) which details the CPI coverage of COICOP 11 shows that prices are available for accommodation products found under CPA codes 55.10.10 (Room or unit accommodation services for visitors with daily housekeeping) and 55.20.11 (room or unit accommodation services for visitors in youth hostels and holiday cabins). Prices are also collected under COICOP 10 (Education) for 55.09.11 (room or unit accommodation services for students in student residences and school dorms).

Table 4: CPI coverage of COICOP 11

Item	No. of quotes	Frequency	Collection method
Pint of Stout	133	Monthly	By Pricers in Licensed premises which includes Hotels
Half pint of Lager	133	Monthly	By Pricers in Licensed premises which includes Hotels
Pint of Lager	133	Monthly	By Pricers in Licensed premises which includes Hotels
Bottle of Lager	133	Monthly	By Pricers in Licensed premises which includes Hotels
Pint of Cider	128	Monthly	By Pricers in Licensed premises which includes Hotels
Pint of Ale	122	Monthly	By Pricers in Licensed premises which includes Hotels
Bottle of Cider	131	Monthly	By Pricers in Licensed premises which includes Hotels
Flavoured Alcoholic Drink	133	Monthly	By Pricers in Licensed premises which includes Hotels
Half glass of Whiskey	133	Monthly	By Pricers in Licensed premises which includes Hotels
Half glass of Brandy	133	Monthly	By Pricers in Licensed premises which includes Hotels
Half glass of Vodka	133	Monthly	By Pricers in Licensed premises which includes Hotels
Mineral/Mixer	133	Monthly	By Pricers in Licensed premises which includes Hotels
Small bottle of wine (187ml)	132	Monthly	By Pricers in Licensed premises which includes Hotels
Chips (small bag)	85	Monthly	By Pricers in Hotels, Restaurants and Fast food outlets
Lunch	93	Monthly	By Pricers in Hotels, Restaurants & Licensed Premises
Dinner	89	Monthly	By Pricers in Hotels, Restaurants & Licensed Premises
Fast food	84	Monthly	By Pricers in fast food outlets
Take away meal	84	Monthly	By Pricers in Restaurants, cafes and the like
Meal in Ethnic Restaurant	90	Monthly	By Pricers in Restaurants, cafes and the like
Rail Dining Car: Cost of various items		Quarterly:	By letter
Canteens: total cost of lunch comprising of soup/main/dessert/tea or coffee	32	Quarterly:	By letters
Snacks & sandwiches: Various rolls & sandwiches, paninis, wraps, soft drink, tea & coffee	194 (in total)	Quarterly:	By pricers
Hotel accommodation: 1. One night stay 2. Midweek stay 3. Weekend stay incl b& b and dinner	181 (in total)	Monthly	By pricers, letters and internet
Guest houses accommodation: Cost of 2 adults sharing for B & B for 1 night	47	Monthly	By pricers and phone calls
Hostel accommodation: Membership, Overnight rates for dorms & private rooms. Some quotes used for u 18's also.	51	Quarterly:	By brochures & internet pricing.

Prices are available for food service products found under CPA codes 56.10.11 (Meal serving series with full restaurant service), 56.10.12 (Meal serving services in railway dining cars and on ships), 56.10.13 (Meal serving services in self-service establishments), 56.10.19 (Other meal serving services), 56.29.20 (Canteen services) and finally 56.30.10 (Beverage serving services). While it could reasonably be assumed that these prices are representative of those charged to business customers as well as personal customers it would be useful to check with the industry (or other SPPI compilers) if this is in fact the case or if different price determinants (such as group discounts) might apply.

Within the calculation of the CPI separate indices are constructed for each of the COICOP headings listed under Section 3.3. The prices collected for food and beverage services are quite comprehensive and would meet the requirements of an SPPI. Coverage for hotel accommodation includes those for one night and mid-week stays and again these would meet the requirements of an SPPI. Accommodation services provided by Guesthouses are priced on the basis of 2 adults sharing for one night. While a single occupancy room might be a more suitable quotation for SPPI purposes the CPI quotation could be assumed to be a reasonable proxy. Prices for hostels and private rooms are also available although these are likely to be less important, especially in the case of a business to business SPPI. Again it would be appropriate to check with industry to gauge the extent of different pricing arrangements for business customers.

### **5.5 Additional prices required**

In addition to those prices collected by the CPI it may be necessary to collect prices for services that are not typically purchased directly by the personal consumer. Hotels in Ireland usually provide services in addition to accommodation, food, and beverage services – such as hosting of conferences and meetings. These additional services may account for an increased portion of the turnover generated by a hotel in respect of services to business customers and would require regular pricing. Furthermore pricing of typical services (covered by the CPI) may be complicated by discounts offered to conference/meeting organisers and attendees.

While it could be assumed that prices for food and beverage services collected by the CPI constitute an acceptable proxy for the SPPI, additional prices might be required if it is determined that these services follow different price trends for business customers. Food services provided under contract to other enterprises (such as under 56.29.1 under the Classification of Product by Activity definition) are not covered by the scope of the CPI and so would need to be measured.

### **5.6 Turnover detail required**

As previously stated under Section 5.2 a partial SPPI survey or fully derived index would require estimates for the proportion of total turnover for the Accommodation and food services sector generated by each of the constituent services. The CSO's Annual Services Inquiry (ASI) provides grossed estimates of the main economic aggregates, including turnover, for the non-financial traded services sectors. A once off survey of turnover broken down by activity at 3 digit NACE was conducted for the Accommodation and food services sector in parallel with the 2007 ASI. This was confined to a sample of enterprises with 20 or more employees only. There

are no plans to repeat the survey as part of the ASI however, as it is not required by European regulation. A similar survey would need to be conducted as part of the SPPI on a periodic basis (every 5 years).

Results for the survey for turnover broken down by activity conducted for 2007 show that turnover is generated from a mix of activities across each of the sub-sectors. This is especially evident in the case of Hotels where just over half of turnover is from accommodation services.

*Table 5: Composition of turnover (%) by activity for Accommodation and Food Services Sector, 2007 at NACE1.1*

	Hotel services	Camping services	Food serving	Beverage serving	Canteen and catering	Other products n.e.c.
Hotels (55.1)	50.6	1.2	24	17.9	0	6.3
Restaurants (55.3)	1.3	0	76.7	15.1	2.1	4.8
Bars (55.4)	3.6	0.2	25.4	61.7	0.4	8.8
Canteen and Catering (55.5)	0.1	0	11.6	6.8	73.1	8.4

These results would be useful in the compilation of an SPPI although they have a number of weaknesses in that regard. The above table is essentially a “sector to sector” rather than a “sector to product” matrix. The breakdown by activity is not detailed enough, missing for example the hosting of conferences/meetings. Furthermore these turnover by product estimates should ideally be broken down by customer type (business, customer, government). While such a breakdown may be relatively easy to collect in respect of conference/meeting services it is unlikely that respondents could readily provide such splits for other services, food and beverage serving in particular. A “business to all” index may well be more appropriate than attempting to compile a “business to business” index as most of the price observations would be collected from the CPI and respondents might find it difficult (or even impossible) to separate out turnover generated by business customers.

The Irish Retail Sales Index differs from the strict NACE (Rev. 2) retail trade classification (NACE 47) owing to the inclusion of some additional sectors including Bars (NACE 56.3). Retail sales volume indices exclude the effects of retail price changes. These indices are calculated by deflating each value index using specially constructed deflators calculated for individual indices. The deflators used for the RSI are calculated based on a combination of current prices gathered for the Consumer Price Index (CPI) and deflator base-weights constructed using product micro data gathered every 5 years from enterprises as part of the rebasing process. These data are essentially distributions of turnover by COICOP classified products for each enterprise. Table 5 (overleaf) details the turnover by product distributions for Bars in 2005. These turnover splits (in particular the level of detail provided for) would meet the requirements of the SPPI for this subsector, at least in respect of a “business to all” index. It shows that almost 95% of turnover is generated from the sale of beverages, food and tobacco.

*Table 6: Turnover by product for Bars 2005*

<b>Product</b>	<b>% of Turnover</b>
Coffee, Tea	1.1
Mineral waters, Soft Drinks and fruit and Veg. Juices	5.9
Spirits Take home	1.3
Wine And Cider - take home	1.3
Beer - take home	2.1
Tobacco	1.2
Bottled Gas	0.1
Liquid Fuels	0.0
Solid Fuels	0.1
Petrol	0.2
Diesel	0.1
Newspapers books & Stationery	0.2
Alcohol - Bar	63.5
Food - Bar	18.1
Other Goods & Services	4.7

## **6. Summary**

Ireland does not currently compile an SPPI for the Accommodation and food services sector as it is not required to do so by European regulation. In the absence of such a legal requirement the cost and response burden of an index for the sector would need to be minimised. Relevant detail on the sector generated in the compilation of the Consumer Price Index, Annual Services Inquiry and the Retail Sales Inquiry could be reused to produce an SPPI based on a partial survey or a fully derived index. Data available on prices is very good, with just a few minor gaps and allowing for some use of proxies. However the data available on turnover, with the exception of the Bars sector, is much weaker and would most likely need to be supplemented by additional information. The plausibility or effectiveness of the partial survey or a fully derived index approaches would need to be analysed in consultation with the industry and other compilers.