

# **29<sup>th</sup> Voorburg Group Meeting on Services Statistics**

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**Cross Cutting Topics – Part 2**

**Sectoring – Turnover and prices for various sectors**

**(B to B, B to E)**

**Hungary**

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## 1. INTRODUCTION

In the services area, as one of the most important development areas is considered the production of Services Producer Price Indices (SPPIs) as deflators to calculate volume indicators. Beside the improvements of gross value added (GDP), the European plans for future (Framework Regulation for the Integration of Business Statistics, FRIBS) include the introduction of a new index of services production (ISP). The compilation of an ISP indicator is based on turnover/output data and on appropriate deflators, principally SPPIs. As we know – according to the international methodological handbooks and proposals – to calculate the performance indicators at constant prices concerning the total industrial turnover/output (e.g. ISP or GDP), B2All deflators are needed.

To produce high quality volume indicators, the consistency between turnover/output data and deflators must be ensured. It means that the compilation of SPPIs should reflect the structure of the turnover data to be deflated. In other words, it may be recommended to calculate a sub-index for all relevant submarket.

In Hungary the total turnover data – concerning the short-term statistics (STS) as well as the structural business statistics (SBS) – are available almost for the whole service sector. The production of services producer price indices (SPPIs) fully covers requirements of the current STS-regulation for determined services activities (see Appendix). Price statistical observations – as a result of which the SPPI indices of 14 groups of services are published in Hungary – affect four sections.<sup>1</sup>

From the 1st quarter of 2013, beside the producer price indices of services provided to businesses (business to business, B-B) required by STS-regulation, the price indices of services provided to all customers (business to all, B-All) are disclosed.

According to the European STS-regulation, price indices calculated in national currencies should reflect domestic as well as export price developments, however, the separate publication of domestic and export price indices has not been compulsory so far.

Because the average rate of price change of the observed groups of services is influenced by the specific features of the different service activities, the differing market environment, the effort of companies to follow inflation, the exchange rate of foreign currency, and the special needs of contractors as well as several other factors – Hungary follows a sector-specific price observation and index calculation approach.

The overall objective of this paper is to summarize the most important issues on identification and statistical observation of the most important submarkets in services areas.

## 2. TURNOVER STATISTICS

In Hungary the main sources of turnover/output data are SBS and STS **statistical surveys** and **administrative databases** (mainly tax data).

As observations unit the **enterprise** is considered.

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<sup>1</sup> According to NACE Rev.2: Transportation and storage (H); Information and communication (J); Professional, scientific and technical activities (M) and Administrative and support service activities (N).

## 2.1. The structure of the total Turnover/output

Regarding the subject of this study, the **structure of the total turnover** (B-All) could be characterized as follows: services provided by the resident producers could be either sold to customers that are *businesses (B2B)* or end user consumers: *households (B2C)* and other (B2Other: public bodies and export).

### **Background**

Services typically used by companies are sold to few people (e.g. management consultancy activities). In such a case B2B indices could be used as adequate estimations for the B2All indices. However, most of services principally purchased by households (B2C) also can be seen as a B2B product (e.g. some kinds of passenger transport sold to customers that are persons representing enterprises). It should be noted, that only the final transaction in the sales/purchase chain is a true B2C relationship.

### **How to identify B2B and B2C trade**

Regarding the service industries, some possible areas of the significant demand of businesses or households could be selected by consideration of the following information:

- The content of the related classifications;
- Weights from the SBS statistics;
- Weights from the National Accounts;
- Expansion of the data collection(s) on turnover/turnover structure;
- Information received from the trade associations or market leader companies;
- Information received from the state authorities/ Use of special administrative data.

In Hungary all these data sources are taken into account. To obtain the weights for calculation of B-All index as weighted average of B2B and B2C indices, the special part of the structured business statistics survey (SBS, Annex VIII) has been expanded (beside total turnover, the turnover of sales to consumers is also collected for selected area). In general, a significant B2C market share could be taken into account for the following service areas: housing, transport, communication, recreation and culture, hotels and restaurants and miscellaneous (e.g. finance and assurance). It should be noted however, that the quality of information received is limited.

## EXAMPLES

In accordance with the STS-SPPI coverage, the estimated weights for calculation of B2All SPPIs using adequate sub-indices for B2B and B2C submarkets are presented in the Table 1.

Table 1

### The estimated turnover share for B2B and B2C markets

Hungary, Total Turnover=100%

CPA 2008	Name	Estimated Turnover share	
		B2B	B2C
51	Passenger air transport	20	80
53	Postal activities	75	25
61	Telecommunication	35	65

The using of **SBS data sources**, combined with the expert estimations for identification of B2B and B2C submarkets at the division (2-digit) level – for the “Land transport services and transport services via pipelines“ (H49) – is illustrated by Table 2. and Table 3.

**Case 1:** It is assumed, that the turnover share of business passengers is not significant (it is lower than e.g. 10 % in all related classes 4910,4931, 4932 and 4939), thus B2B services can be treated as B2C products (B2C is estimated by HICP-CT at the class (4 digit) level. On the other hand the demand of households is negligible for services groups 492, 494,495.

*As a result, the turnover share between B2B and B2C markets at division (2-digit) level is **79%** and **21%**.*

**Case 2:** It is assumed, that the turnover share of business passengers is significant (it is higher than e.g. 10 % in all related classes 4910,4931, 4932 and 4939). The turnover share of B2B markets for these classes (4 digit level) was estimated by 20%.

*As a result, the turnover share of submarkets is **83%** and **17%**.*

Table 2

## Case1, SBS, 2011

CPA 2008	Name	Turnover share SBS 2011	Estimated Turnover share of submarkets			Deflators/proxies		
		B2All	B2All	B2B	B2C	B2All (B2B+B2C)	B2B	B2C
		%	%	%	%			
49	Land transport services and transport services via pipelines	100	100	79	21	SPPI+HICP-CT	SPPI	HICP-CT
4910	Passenger rail transport, interurban	3,9	100		100			HICP-CT
4920	Freight rail transport	6,5	100	100			SPPI	
4931	Urban and suburban passenger land transport	8,6	100		100			HICP-CT
4932	Taxi operation	1,0	100		100			HICP-CT
4939	Other passenger land transport n.e.c.	7,3	100		100			HICP-CT
4941	Freight transport by road	65,6	100	100			SPPI	
4942	Removal services	0,1	100					
4950	Transport via pipeline	7,1	100	100			SPPI	

Table 3

## Case2, SBS, 2011

CPA 2008	Name of the service	Turnover share SBS 2011	Estimated Turnover share of submarkets			Deflators/proxies		
		B2All	B2All	B2B	B2C	B2All (B2B+B2C)	B2B	B2C
		%	%	%	%			
49	Land transport services and transport services via pipelines	100	100	83	17	SPPI+ HICP-CT	SPPI	HICP-CT
4910	Passenger rail transport, interurban	3,9	100	20	80		HICP-CT	HICP-CT
4920	Freight rail transport	6,5	100	100			SPPI	SPPI
4931	Urban and suburban passenger land transport	8,6	100	20	80		HICP-CT	HICP-CT
4932	Taxi operation	1,0	100	20	80		HICP-CT	HICP-CT
4939	Other passenger land transport n.e.c.	7,3	100	20	80		HICP-CT	HICP-CT
4941	Freight transport by road	65,6	100	100			SPPI	SPPI
4942	Removal services	0,1	100					
4950	Transport via pipeline	7,1	100	100			SPPI	SPPI

It should be noted, that using the above turnover shares concerning the analysed two cases, sub-indices B2B and B2C will be slightly different. However B2All SPPIs calculated as weighting average of B2B SPPIs and B2C SPPIs using different weights at 2 digit level will be the same.

**How to identify B2E trade**

Concerning the SBS and STS as well as National Accounts statistics, export means “products or services sold to the non-resident customers”.

In Hungary within the frame of the SBS and STS statistics, export data are aggregated using data of companies performing dual accounting. For this reason the coverage and quality of these statistics is limited.

Regarding the STS-SPPI coverage, the turnover shares of domestic and non-domestic markets – based on the SBS data – are available in the Table 2.

From the available the share of export services in eight services groups exceeded 10%. The highest proportion was accounted for warehousing and storage followed by information service activities and freight transport by road and removal services.

Table 4:

**Yearly SBS data, 2012**

Total Turnover=100%

Nace Rev.2	Name	Domestic market %	Non-domestic market %
49.4	Freight transport by road and removal services	70	30
52.1	Warehousing and storage	54	46
52.24	Cargo handling	83	17
53	Postal activities	95	5
61	Telecommunications	96	4
62	Computer programming, consultancy and related activities	74	26
63	Information service activities	55	45
69.1+ 69.2+ 70.2	Legal and accounting activities; management consultancy activities	75	25
71	Architectural and engineering activities; technical testing and analysis Advertising and market research	88	12
73	Employment activities	88	12
78	Employment activities	95	5
80	Security and investigation activities	98	2
81.2	Cleaning activities	99	1

**The main challenges concerning the identification of the B2E submarket**

Globalisation and the rapid development of technology has a significant impact on international trade. Companies are establishing alliances with companies abroad, or they contract the partner organizations in order to improve international services and reduce the cost of the operations.

It is important to distinguish between the resident consumption of international services and service exports, in particular concerning the transport, postal and telecommunication services. For example according to the international rules for postal activities the export is dominated by delivery of letters (parcels) coming from abroad for a sum agreed between the national post offices concerned. In the case of telecommunication, mobile network operators must establish Roaming Agreements to govern the exchange of customer billing data for their customers who “roam” on the visited network. Export is highly covered by inboard (foreign visitor’s) roaming rates. Roamers are not billed directly by the visited operator. They will be billed at home on the regular monthly bill. However the bill of the visited operator – located outside the home country - will be settled by the home operator.

### 3. PRICE STATISTICS

As mentioned above, for deflation of the total turnover B2All SPPIs – reflecting the price development of all important submarkets (B2B, B2C, B2Others) - are the most appropriate.

#### 3.1. Services producer price indices, SPPIs

Beside availability of B2B price indices actually required by the European STS-regulation, many countries apply consumer prices (CPI) or Harmonised Index of Consumer Prices (at constant tax, HICP-CT)) as proxies for SPPIs (e.g. passenger transport, food and accommodation). When CPIs are available – to reduce the cost and burden – it could be proposed the use of CPIs as proxies, especially for B2C demand.

In Hungary the publication of services producer price indices required by European STS-regulation started in 2010 with the product-base, B2B indices, followed by dissemination of B2All indices in 2013. The main parameters of SPPIs are listed below.

##### ***Coverage by the type of the client:***

- **B2B SPPIs are available** according to the current STS regulation published since 2010 (full coverage, time series for 2007Q1- );
- **B-All SPPIs are available** to fulfil the needs of data users, for example SNA or Eurostat – published since 2013 (time series for 2012Q1- , the time-series for 2007-2011 are under development).

**For STS-SPPI coverage** the calculation is made using **mixed approach**: as weighting average of B2B and B2C indices (actually for passenger transport, post and telecommunication activities)

**For other** areas the methodology is under development (following the sector-specified approach).

##### ***Coverage by the residency of the client (based on survey of relevant data):***

- **Domestic prices** (equal to the coverage and quality of the overall SPPI);
- **Non-domestic/Export prices** (limited coverage and quality, further development is needed).

### 4. SPPI QUESTIONNAIRES

On the Hungarian questionnaires, domestic prices of services (sold to the resident customers) and export prices of services (sold to the non-resident customers) are collected on separate pages. Each representative service (column b) is given a code comprising of the CPA code (max. 6 characters) and another 4 digits for the



unique identification of the service. Turnover data (B2B) for the previous year are also collected at CPA 4 and 6 digit-level for weighing purposes.

Figure 1

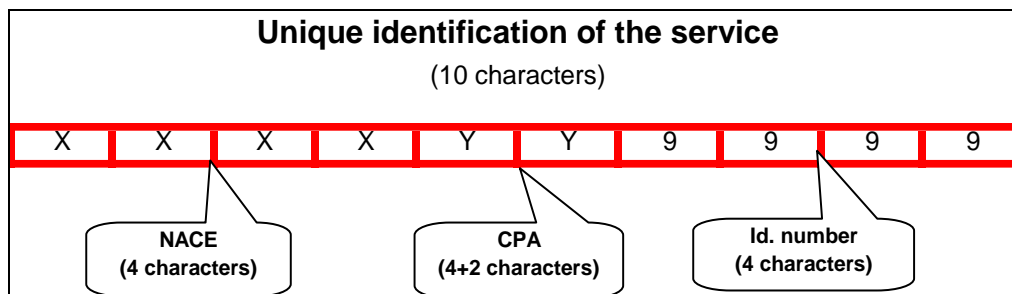
### Hungarian General SPPI survey questionnaire

A) Services sold to the resident customer						
Representative service		Unit of measure	Producer price		Turnover B2B (previous year)	Remark, justification of the price change
name of the service	kode		previous quarter	current quarter		
a	b	d	e	f	g	h
	A					

A similar page "B) Services sold to the non-resident customer" is also used.

Figure 2

### Structure of the code of a representative service on the SPPI questionnaire



## 5. NEW DEVELOPMENTS

In the frame of a European Grant project, Hungary started to develop a methodological basis for new SPPIs and deflators for value data concerning four service divisions as follows:

- 1: Land transport and transport via pipelines (H49);
- 2: Real estate activities (L68);
- 3: Other professional, scientific and technical activities (M74);
- 4: Rental and leasing activities (N77).

The B2All SPPIs are expected to be produced as weighted average of relevant sub-indices: B2B and B2C SPPIs.

Based on our previous experiences, the observation of B2E prices is also followed.

To improve the quality of the turnover share between particular submarkets, it is necessary further methodological development and cooperation between statisticians and market players.

The Hungarian plans for future are highly depend on European legal rules, for service statistics on the implementation of new STS-package as part of the FRIBS.

## 6. SUMMARY

In Hungary the services industry regarding the turnover indicator for related areas is almost fully covered. Within the frame of the Hungarian SPPI observation system, actually the services areas required by the European STS-regulation are covered by producer price indices. Primarily the product-based B2B price indices are calculated, however, B2All indices are also produced as weighted average of B2B and B2C SPPIs. The price development of export services is also taken into account, whereas B2E prices are also received via SPPI questionnaires.

In general, the Hungarian macroeconomics indicators are based on data received from enterprises. Concerning service statistics – beside the observation of new service areas – as one of the most important fields to improve, the consistency between turnover data and price indices as deflators is considered.

Hungary has introduced B2I as well as B2B SPPIs to the SNA recently and takes part in the development work of the European Task Force with the main objective to define a new service volume indicator (ISP) and develop an internationally harmonized ISP manual for statisticians.

## APPENDIX

### Observed service activities according to the European STS-regulation

<b>NACE Rev.2</b>	<b>Services groups (ANNEX D)</b>
49.4	Freight transport by road and removal services
50.1 + 50.2	Sea and coastal passenger and freight water transport
51	Air transport
52.1	Warehousing and storage
52.24	Cargo handling
53.1	Postal activities
53.2	Other postal and courier activities
61	Telecommunications
62	Computer programming, consultancy and related activities
63	Information service activities
69_702	Legal and accounting activities; management consultancy activities
71	Architectural and engineering activities; technical testing and analysis
73	Advertising and market research
78	Employment activities
80	Security and investigation activities
81.2	Cleaning activities