

36th Voorburg Group Meeting on Services Statistics

Helsinki, Finland

20th September to 23th September, 2021

**Cross Cutting Topics – Part 1
SPPIs**

Hungary

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The views expressed in this paper are those of the author alone and do not necessarily represent the position of HCSO or any other organization with whom the author may be affiliated.

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INTRODUCTION

In the line with the Framework Regulation Integrating Business Statistics (FRIBS) within the European Business Statistical programme (EBS), the extension of coverage of Service Producer Price Indices (SPPIs) has been necessary. Among others, SPPIs are used as deflators for producing of volume indicators (real GDP and Index of Services Production, ISP).

Regarding the cost and burden on National Statistical Office and data suppliers, in Hungary SPPIs are also used for deflation of the foreign services revenue. The Department of Foreign Trade Statistics is provided by export price indices quarterly.

According to the European regulation, SPPI express the average price development of services provided by the resident producers and sold to all type of customers (business to all, B2All).

It is worth mention however, that SPPIs should reflect the structure of the total output to be deflated ensuring the necessary consistency. This goal can be achieved by producing sub-indices for all relevant submarkets including export price indices.

The overall objective of this paper is to give an overview on Hungarian experiences concerning the development of services provided for non-resident customers.

SERVICES PRODUCER PRICE INDICES, SPPIs in Hungary

In European Union the SPPIs are classified as principal economic short-term (STS) indicators (PEEI)¹ – concerning six sections in the EBS according to the NACE Rev. 2.

- H Transportation and storage;
- I Accommodation and food service activities;
- J Information and communication;
- L Real estate activities;
- M Professional, scientific and technical activities;
- N Administrative and support service activities.

Nevertheless, the above mentioned industries are not yet fully covered by SPPIs in most of countries.

In Hungary, all required SPPIs are available and disseminated at division (2 digit) level for the current EBS-coverage. The publication of new SPPIs started this year Jun, 2021. However,

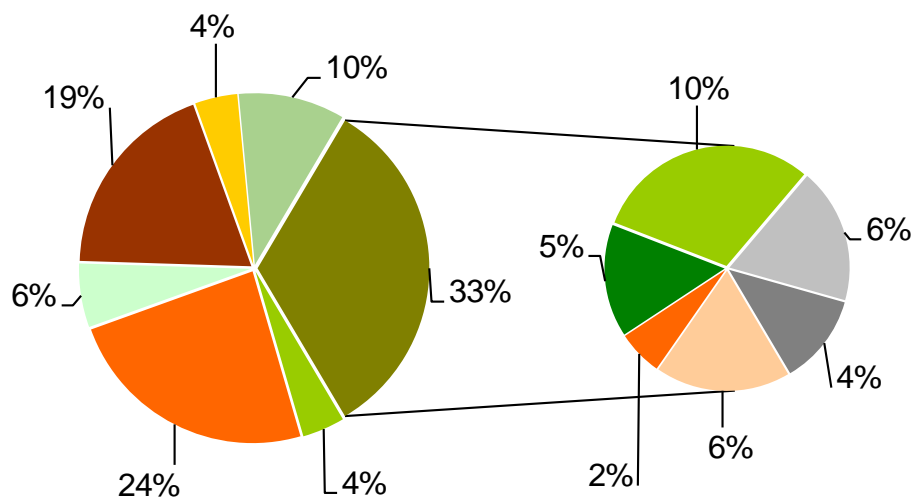
¹ STS, Principal European Economic Indicators – PEEIs: industrial production index, industrial output price index for domestic market, industrial new orders index, industrial import price index, production in construction, turnover index for retail trade and retail, turnover index for other services, corporate output price index for services

domestic and non-domestic indices are produced for internal use, they are not publicly available. Indices are product-based.

Figure 1.

GDP shares, Hungary, 2019

(Service sectors according to the EBS are shown by green with the proportion of 33%).



- Agriculture, forestry and fishing
- Industry
- Construction
- Other non-market services (O-S)
- Financial and insurance activities
- Wholesale and retail trade; repair of motor vehicles and motorcycles
- Transportation and storage
- Accommodation and food service activities
- Information and communication
- Real estate activities
- Professional, scientific and technical activities
- Administrative and support service activities

Source: HCSO

Concerning the coverage by the type of customer, in Hungary B2All, B2B, B2C and B2E indices are calculated, (B2Other is included in B2B index).

In accordance with the EBS, to establish an internationally comparable indicator of services production (ISP) – B2All deflators are required, which reflect the average price development of the total output as follows:

- *coverage of all destinations regarding the residency of client;*
- *coverage of all destinations regarding the type of customer (business, household, other).*

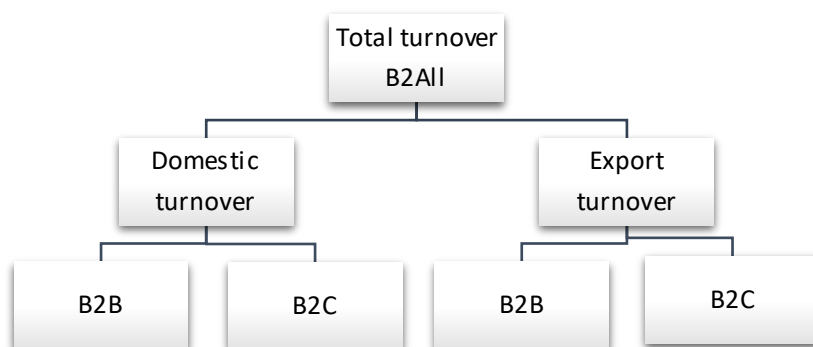
COVERAGE BY THE TYPE OF CUSTOMER

SPPIs, when using them as deflators for the total industrial output, theoretically should cover all types of users (B2All):

- **businesses (B2B)** (currently the B2B index reflects the price development of sales for public organizations as well).
- **households (B2C)** – business to customers.

Figure 2

The Turnover share on type of consumer of the services



In most of cases the output of services production is predominantly accounted from sales for the business partners, therefore B2B indices are adequate estimations for the B2All SPPIs. At the same time – in some cases – the demand of households is also significant, thus B2B indices are supplemented by other deflators, first off all by properly adjusted consumer prices (Harmonized Indices of Consumer Prices at Constant Tax, HICP-CT).

B2All SPPIs are computed as weighted average of B2B SPPIs and HICP-CT.

Regarding the services by the residency of clients, the turnover shares by domestic and non-domestic markets according to the structure business statistics (SBS) data are summarised in Table1.

Table 1

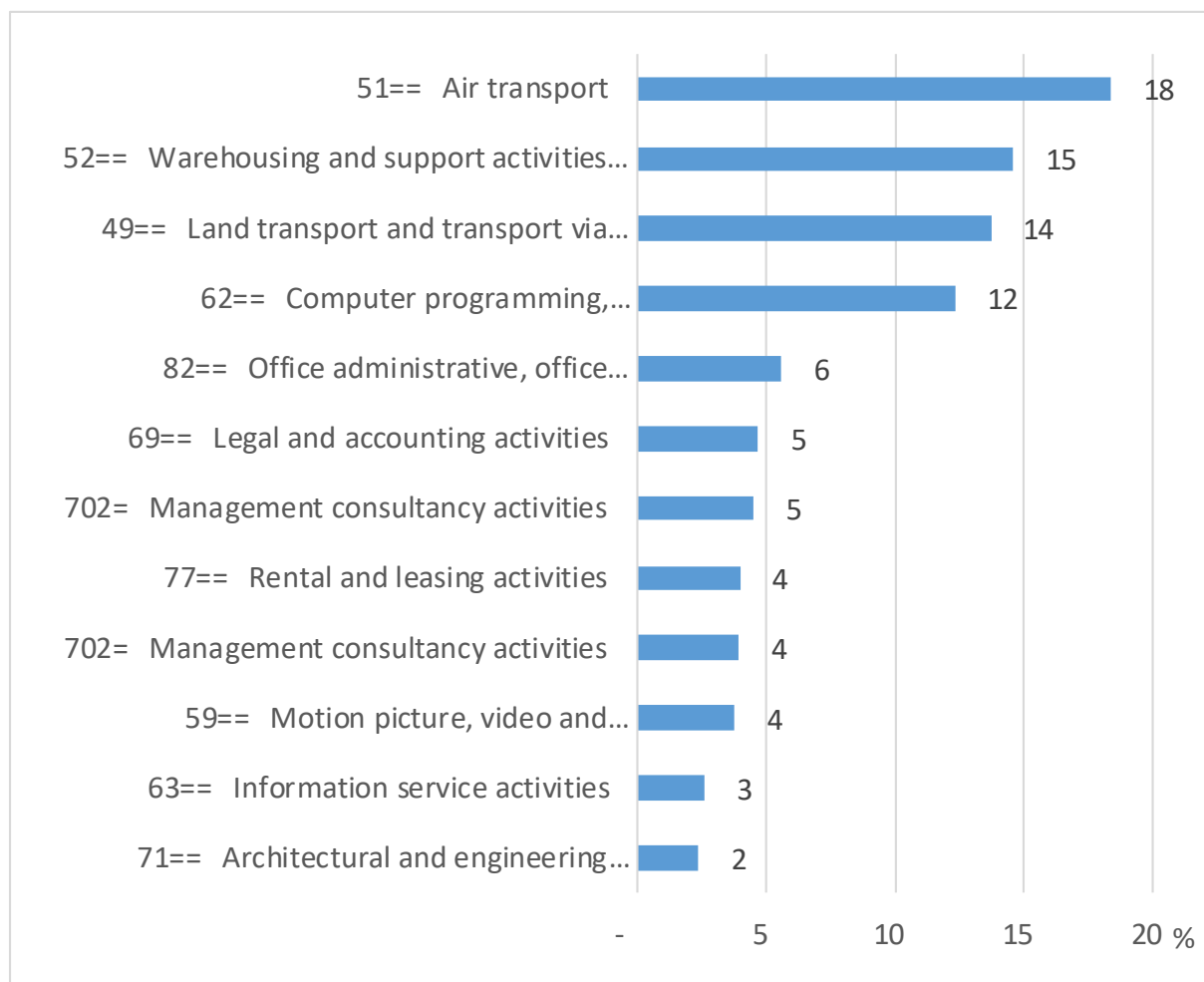
Domestic and non-domestic SBS turnover shares in Hungary, 2019 by NACE Rev.2

Section	NACE' Rev. 2. Division	Turnover share	
		domestic	non-domestic
		%	%
H	49== Land transport and transport via pipelines	77	23
	50== Water transport	55	45
	51== Air transport	2	98
	52== Warehousing and support activities for transportation	67	33
	53== Postal and courier activities	90	10
I	55== Accommodation	89	11
	56== Food and beverage service activities	99	1
J	58== Publishing activities	82	18
	59== Motion picture, video and television programme production, sound recording and music publishing activities	58	42
	60== Programming and broadcasting activities	79	21
	61== Telecommunications	95	5
	62== Computer programming, consultancy and related activities	70	30
	63== Information service activities	60	40
L	68== Real estate activities	98	2
M	69== Legal and accounting activities	72	28
	702= Management consultancy activities	82	18
	71== Architectural and engineering activities; technical testing and analysis	90	10
	73== Advertising and market research	91	9
	74== Other professional, scientific and technical activities	91	9
N	77== Rental and leasing activities	72	28
	78== Employment activities	88	12
	79== Travel agency, tour operator and other reservation service and related activities	89	11
	80== Security and investigation activities	99	1
	81== Services to buildings and landscape activities	99	1
	82== Office administrative, office support and other business support activities	73	27

Figure 3.

Export Turnover shares by SBS data in Hungary, 2019

(Total non-domestic Turnover for the EBS coverage = 100%)



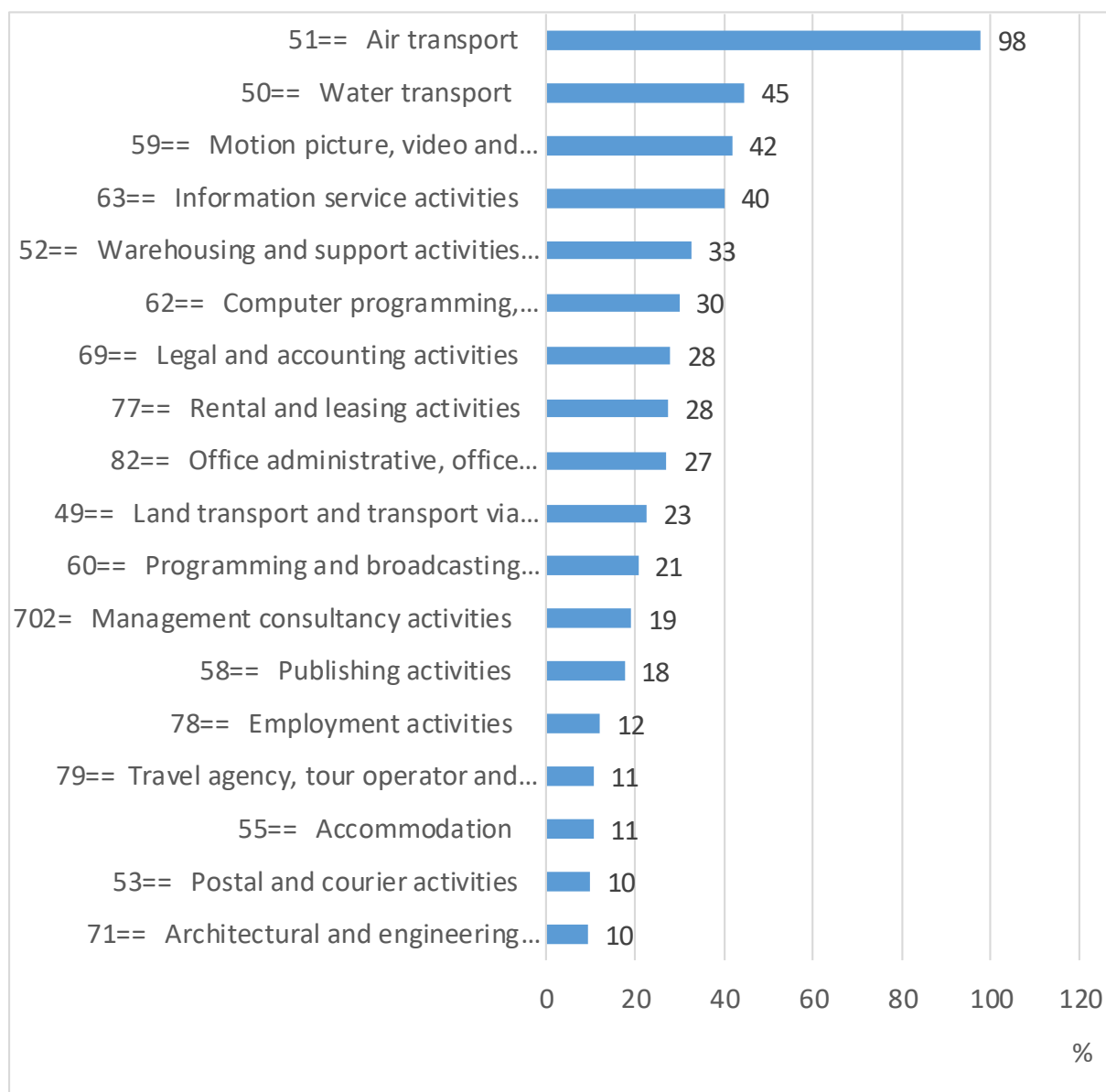
Source: HCSO

In terms of export share of a particular division compared to the total EBS services export, the most important area was Air transport (18%), then Warehousing and support activities for transportation (15%) followed by Land transport and transport via pipelines (14%) and Computer programming, consultancy and related activities (12%), while the proportions of remaining industries were below of 10%. In case of four areas it was about 1% and concerning three areas it was negligible.

Figure 4.

Export Turnover shares, Hungary, 2019

(Total Turnover of the division = 100%, based on SBS data)



Source: HCSO

The highest export share compared to the total Turnover (B2All) of the relevant division was accounted for air transport (98%) followed by Water transport ((45%), Motion picture, video and television programme production, sound recording and music publishing activities (42%), Information service activities and Warehousing and support activities for transportation (40%) in 2019. The proportion of further 14 areas was between 10% and 33% and from the remaining 7 areas in case of three (56, 80, 81) it was only about 1%.

B2E (Export) TRADE

Definition of the export service:

The *destination* is determined by the *residency* of the third party that has ordered or purchased the product.

- ✓ *Non-domestic market* (Export) means products or services sold to the non-resident customers,
- ✓ *Domestic market means* products or services sold to the resident customers.

Remark: Export data are influenced by the exchange rate of the foreign currency. In Hungary price data received at foreign currency are converted to the HUF by the quarterly exchange rate of the Hungarian National Bank.

Main challenges that statisticians face

- ✓ Availability of consistent data sources;
- ✓ Globalization in general;
- ✓ Establishing of affiliated companies/subsidiaries abroad;
- ✓ To distinguish between the international services and service exports (e.g. concerning *transport, postal, telecommunication and accommodation services*).

In Hungary B2E SPPIs are obtained as a result of the compulsory quarterly SPPI survey. Within the frame of the SBS and STS statistics, export data are aggregated using data of companies performing dual accounting (because of this, the coverage and quality of these statistics is limited).

According to the Hungarian experiences, some **special cases for export services** could be mentioned:

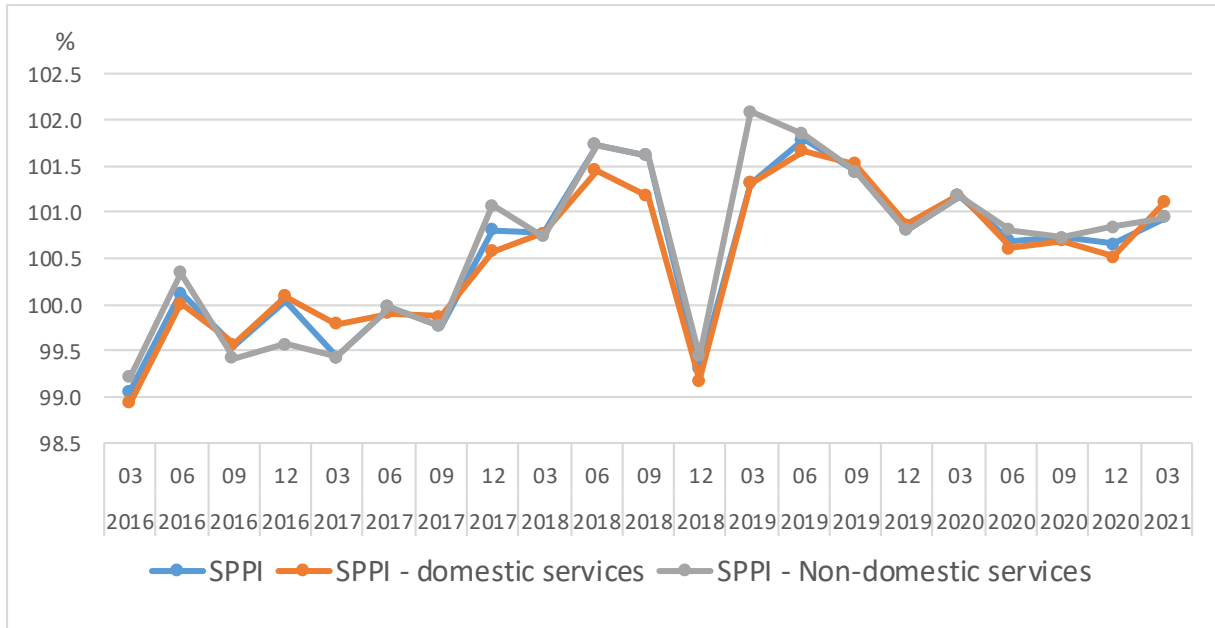
- ✓ Concerning the freight transport by road activities, export is the total sum paid by a non-resident company regardless of national borders;
- ✓ For postal activities the export is dominated by delivery of letters (parcels) coming from abroad for a sum agreed between the national post offices concerned.
- ✓ 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.
- ✓ As regard the accommodation, export / inbound tourism means accommodation for foreign tourists in Hungary.

EXAMPLES

Figure 5.

Export price indices on 49 - Land transport and transport via pipelines

(previous quarter = 100%)

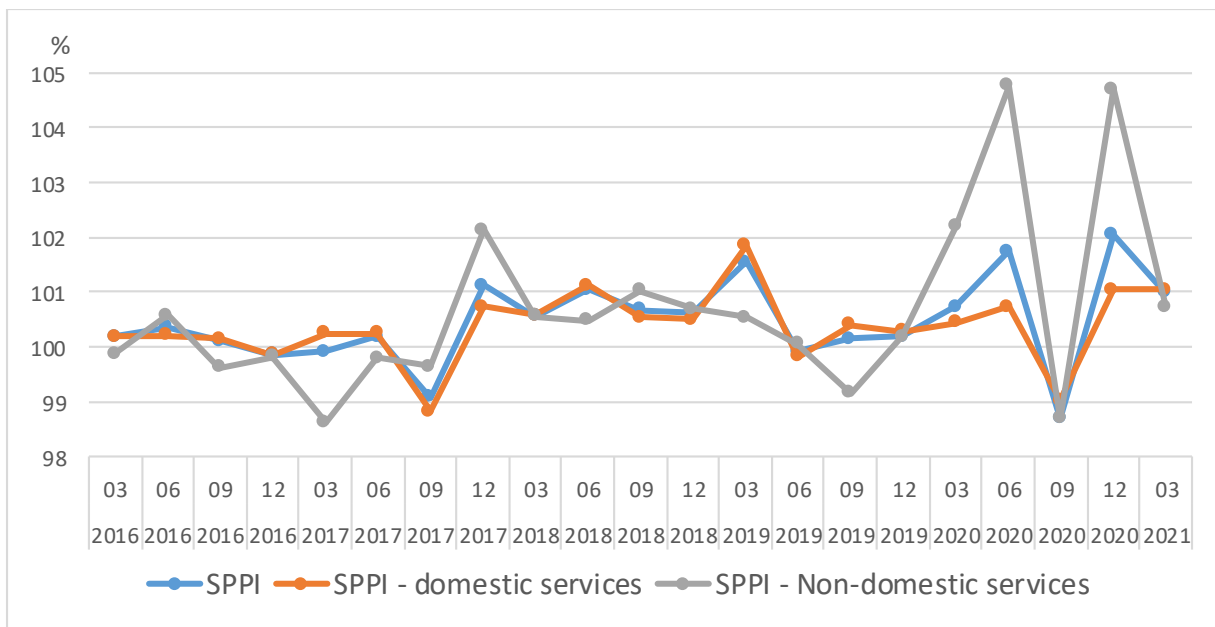


Source: HCSO

Figure 6.

Export price indices on 52 - Warehousing and support activities for transportation

(previous quarter = 100%)

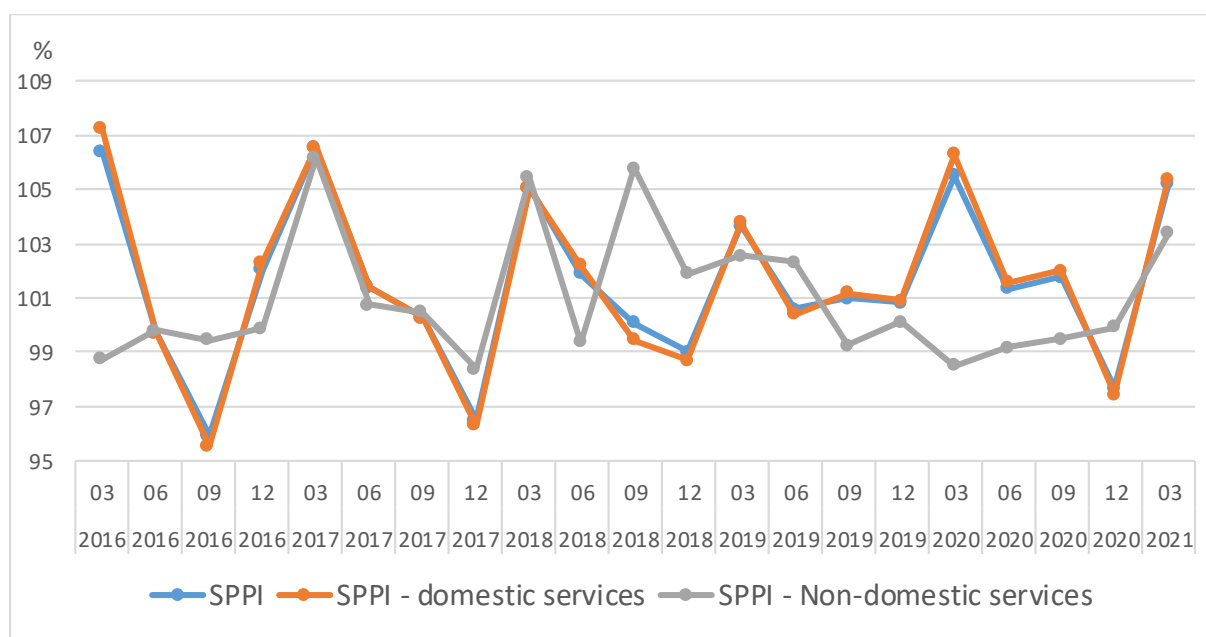


Source: HCSO

Figure 7.

Export price indices on 53 - Postal and courier activities

(previous quarter = 100%)

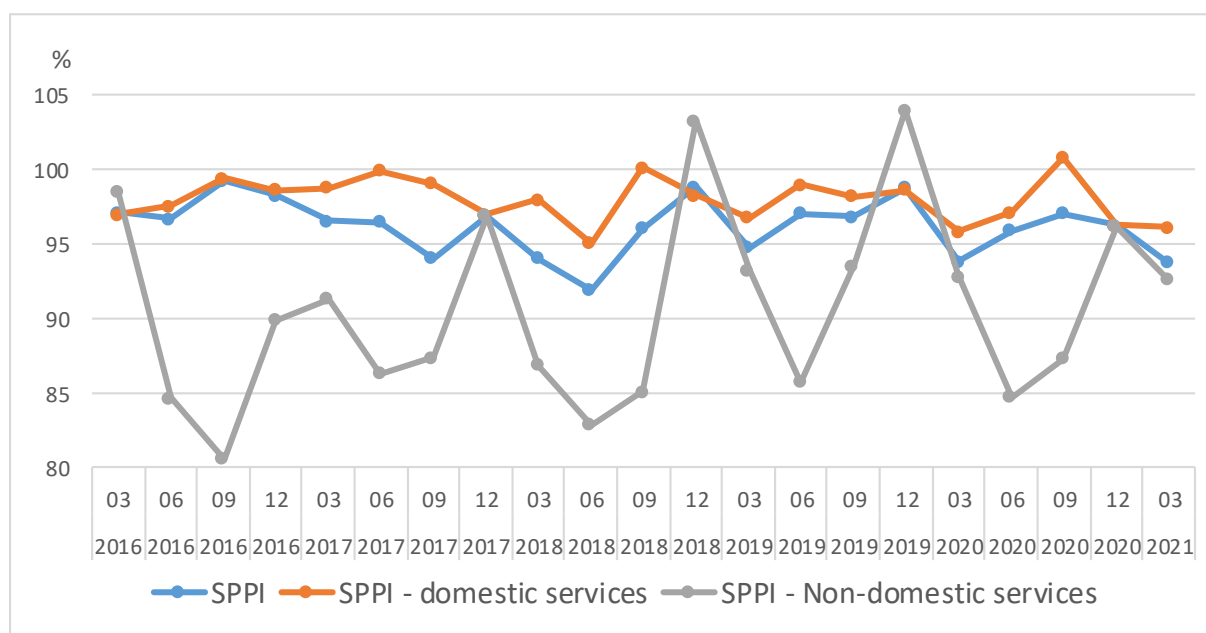


Source: HCSO

Figure 8.

Export price indices on 61 - Telecommunications

(previous quarter = 100%)



Source: HCSO

USING OF SPPIs FOR DEFLATION OF THE REVENUE IN INTERNATIONAL TRADE FOR SERVICES

Concerning the survey carried out in compliance with European Regulations ((EC) No **184/2005/EK**, (EU) No **555/2012/EU** and (EC) No **707/2009/EK**) on Community statistics concerning balance of payments, international trade in services and foreign direct investment, for deflation of results at current prices SPPIs are used.

Meta information on received data:

International trade in services is defined as all transactions based on a private contract, in which a resident of an economy provides services to (exports), or acquires services from a non-resident (imports).

Valuation: Transactions are valued at the actual price agreed by the supplier and the consumer, without VAT. The conversion of values into HUF is based on the official medium exchange rate of the National Bank of Hungary valid at the time at which the transaction occurs.

Date or period of delivery of services: the actual date or period of service transactions between residents and non-residents, namely the date or period when the service was supplied or acquired. This may differ from the time when the payment is made or received.

Partner country: in travel the country where the traveller arrives from, or the country of destination in case of Hungarians travelling abroad. In transportation services the country of the invoice payer in exports and that of the invoice issuer in imports. In case of business service the country in which the non-resident trading partner is domiciled.

Areas concerned using of SPPI to calculate real performance indicators for international trade in services

- ✓ **Travel;**
- ✓ **Transportation services by mode of transport** (sea transport, air transport, rail transport, road transport, inland waterway transport, pipeline transport and electricity transmission);
- ✓ **Other supporting and auxiliary transport services** (forwarding, warehousing);
- ✓ **Postal and courier services;**
- ✓ **Business services** (telecommunications services, computer and information services, computer services; purchase and sale of originals and proprietary rights of computer software and applications; news agency services; database services, on-line publishing);

- ✓ **Charges for the use of intellectual property;**
- ✓ **Other business service** (other trade-related services (agents' fees); operational leasing services; legal services; accounting, auditing, book-keeping and tax consulting services; business and management consulting and public relations services; advertising, market research and public opinion polling; engineering services; other business, professional and technical services (n.i.e.).)

SUMMARY

An internationally harmonized methodological basis for services producer price indices (SPPIS) as deflators for turnover and other performance indicators are appropriate for purposes of formulating economic policy and for monitoring of volume data including the area of international trade in services.

SPPIs should reflect the structure of the total output to be deflated. This goal can be achieved by producing sub-indices for all relevant submarkets including export price indices.

In Hungary within the European Business Statistical programme (EBS) and the SPPI national observation system all areas concerned have been developed and as a result, the publication of index series started in June, 2021. Data are available at division and section level according to the NACE Rev.2 classification system. As well as the total composite index is published, covering the domestic and non-domestic services. However, the data series of these sub-indices are produced for internal use, they are not publicly available.

Taking into account the cost and burden on National Statistical Office as well as data suppliers, in Hungary - in addition to STS statistics and national accounts needs - SPPIs are also used for deflation of the revenue accounted by the international trade in service.

The Department of Foreign Trade Statistics is provided by export price indices quarterly. Indices are product-based which are reweighted by the needs of international trade statistics.

Export for international trade in services is defined as all transactions based on a private contract, in which a resident of an economy provides services to a non-resident client.

To ensure the necessary consistency between SPPIs and performance indicators to be deflated, we have regular consultation with the experts of the international trade in service. The ongoing developments include supplementing the sample for SPPI by the most important economic organizations dominant in exports, classification issues, the nature of specific areas as well as forms of dissemination tables and level of aggregates.