



Use of PPIs for service industries as deflators in an ISP

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Objectives

- OECD STISTF is to provide methodological guidance on, and coordinate development of, monthly ISP:
 - STISTF recognises that the development of PPIS is essential.
- This paper intends to facilitate
 - discussion by Voorburg Group on use of PPIS as deflators of value data in this process; and
 - investigation which could lead to maximum use of PPIS.

Experiences of Korea and UK in the use of PPIS for their ISP: Variables collected to construct ISP

- Two types of variables used to collect basic information:
 - value and volume;
 - most popular value data used by both countries is turnover.
- Korea: no use of volume data.
- UK: use value and volume data, e.g.:
 - volume of letters and parcels delivered, employment

Table 1: Variables in use for ISIC I and K

		Korea	United Kingdom
I	601	Gross operating revenue (value)	Ticket holders (passenger-km; volume); Coal and coke transported (tonne-km; volume); Mail and parcel receipts (value)
	602	Gross operating revenue (value)	Gross turnover (value); Turnover (value); Household expenditure on taxis (constant prices)
	603	<i>Not covered</i>	<i>No activity in UK</i>
	61	Gross operating revenue (value)	International passenger revenue (value); Tanker receipts (constant prices)
	62	Gross operating revenue (value)	Index of airline services (volume)
	63	Gross operating revenue (value)	Gross turnover (value); Imports and exports (volume) ¹ ; Freight moved (tonne-km; volume); Index of airport services (volume)
	64	Gross operating revenue (value)	Volume of letters and parcels delivered; Quantity of other transactions; Gross turnover (value)
K	70	Gross operating revenue (value)	Investment property databank 'total return index' (volume); Number of employees ² (volume); Local authority non-trading capital consumption ² (constant prices); Household final consumption expenditure on rent (constant prices) + Central government subsidies ² + Local authorities' subsidies ² + Imputed rent of owner occupied dwellings at 1995 prices - Housing repairs & maintenance (constant prices); Number of particulars delivered to Inland Revenue regarding property/land transfer (volume)
	71	Gross operating revenue (value)	Household final consumption expenditure on self-drive car hire (constant prices); Gross turnover (value)
	72	Gross operating revenue (value)	Gross turnover (value)
	73	Budget outlays (value)	Gross turnover (value)
	74	Gross operating revenue (value)	Gross turnover; Number of employees (volume)

PPIS available in Korea and the UK, and their use as deflators in the monthly ISP

- Korea: Bank of Korea has compiled monthly PPIS since January 1995:
 - coverage of ISIC divisions I and K are extensive;
 - extensive use of PPIS as deflators of value data in Korea.
- UK: PPIS (referred to as 'Corporate Services Price Indexes' in UK) cover large part of ISIC divisions I and K and are produced quarterly, mostly from 1995:
 - only 8 of 24 PPIS available in divisions I and K are used as deflators for monthly ISP:
 - there appears to be a preference to use volume data available on a quarterly basis from administrative sources rather than deflating value data using available quarterly PPIS:
 - for example, Rail Freight, Postal Services & Real Estate Agencies industries (note: this could be due to non-existence of value data for these industries).

Table 2: PPIS and ISP in Korea and UK (Ex.)

Divisions I and K of ISIC 3	PPIS Coverage			Use as deflators in ISP?
	Korea	UK	Korea	UK
602 Other land transport	Passengers & freight	Freight, Coach hire	PPIS used	PPIS used to deflate monthly values.
611 Sea & coastal water transport	Passengers & freight	Commercial vehicle ferries & sea freight	PPIS used	PPIS not used. Quarterly data on tanker receipts in current prices and volume data direct from BoP is used.
633 Travel agents	Not available	Not available	CPI used	Household expenditure deflator is used to deflate monthly values.
634 Other transport agency	Not available	Not available	CPI used	Household expenditure deflator is used to deflate monthly values.
642 Tele-communications	Range of indices	Business use	PPIS used	PPIS used to deflate monthly values.
711 Renting of automobiles	Not available	Car contract hire	Not covered in Korean ISP	PPIS not used. Deflated HH consumption data is preferred.
712 Other transport equipt.	Not available	Not available	Not covered in Korean ISP	Manufacturing PPI is used to deflate monthly values.
743 Technical testing and anal.	Not available	Technical testing series	PPI for other services	PPIS not used. Average Earnings Index & Retail Price Index to deflate monthly values.
744 Advertising	Index produced	Not available	PPIS	Average Earnings Index & Retail Price Index is used to deflate monthly values.
745 Labour recruitment	Not available	Employment agencies index	PPI for other services	PPIS not used. AEI & RPI is used to deflate monthly values.
746 Investigation & security service	Guard sers. index	Security services index	PPIS used	PPIS used
747 Industrial cleaning	Cleaning services	Index produced	PPIS used	PPIS used
748 Other business activist.	Not available	Indices for film processing, etc.	PPI for other services	Commercial film processing: by PPIS Other components: by monthly AEI & RPI.

Use of PPIS to deflate monthly values

Korea PPIS: Monthly

- Extensive use to deflate value data and to construct monthly ISP.

UK PPIS: Quarterly

- Use of quarterly PPIS to deflate monthly values implies either:
 - use of a lagged index; or extrapolating monthly index from the quarterly.
 - UK uses quarterly PPIS to deflate monthly values in many industries, i.e.:
 - Road Freight(602), Telecommunication(642), Investigative & Security (746)
- UK uses monthly Average Earnings Index over quarterly PPIS for many industries, e.g. Labour Recruitment (745) and Technical Testing (743).
- UK also uses a consumer based deflator for entire value for industries where output is split fairly evenly between business and consumer expenditure, i.e.:
 - monthly value data in Travel Agent (633) and Renting of Automobiles (711) deflated using household expenditure deflator.
 - similar practice by Korea, i.e. CPI for Travel Agent (633) and Activities of Other Transport Agencies (634).

Use of quarterly PPIS to deflate monthly values: discussed

- Stability of PPIS could be assessed by:
 - extrapolating monthly indices from quarterly indices and forecasting next two months values; and then
 - comparing these forecasts to the revised values of the extrapolated series once the quarterly value is available.
- Seasonality of PPIS could be assessed.
- Comparing price evolution in PPIS, which are output price indexes, to wage based indices for specific industries could be undertaken.

Use of PPIS as proxy deflators: Background

- National accountants want to replace inappropriate methods (e.g. wage based methods) for deflating values or remove the reliance on unsuitable volume indicators (e.g. employment) for service industries.
 - However the intended users of PPIS (e.g. national accounts & compilers of monthly ISP) can be slow to implement PPIS as deflators once they are developed.
- Studies to assess the correlation or relationship (or expected relationship) between PPIS for certain industries.

Use of PPIS as proxy deflators: discussed

- A comparison could be made between the proposed proxy PPIS and alternative deflators (i.e. wage based indexes, manufacturing PPIs, CPI etc.).
- Korea: uses a broad index of 'PPIs for other services' as a proxy deflator in:
 - Technical Testing(743), Labour Recruitment(745) and Other Bus. Ser(748)
- UK: no examples of PPIS being used as proxy deflators. But,
 - PPIS for business airfares could be considered as a proxy for portion of Travel Agencies revenue generated from business sales;
 - average of PPIS for Car Contract Hire and Construction Equipment Hire could be assessed as an alternative to the Manufacturing PPI currently used as a proxy to deflate Renting of Other Transport Equipment (712).

Issues for discussions

- Use of quarterly PPIS to deflate monthly values
- Use of PPIS as proxy deflators.
- Remark on other current practices.