

Services Producer Price Indices

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Introduction

The Singapore Department of Statistics (DOS) runs the Services Producer Price Indices (SPPIs) programme to develop and compile SPPIs that measure changes in the average prices of services produced by establishments, for selected industries of the Singapore economy. The prices captured reflect the amount received by a producer, exclusive of any taxes.

Quarterly SPPIs are now available on the SingStat Website. These data series complement the existing International Trade and Producer Price Indices for goods (Table 1).

This article highlights the uses of SPPIs, the background of the SPPI programme, and the process to develop and rebase the SPPI.

Uses of Services Producer Price Indices

SPPIs are important indicators that support the making of informed policy decisions and the monitoring of the growth of the Singapore economy.

1) Improving Calculation of Real Growth

The services sector accounts for the largest share of Singapore's Gross Domestic Product (GDP). SPPIs are used as price deflators in the national accounts by converting the nominal values of services output into volume measures. This improves the real growth estimates of the services sector, and concomitantly their productivity figures, which are based on the real growth estimates.

As a consequence, the planning of the future economy is better supported.

2) Monitoring and Analysing Price Trends

The monitoring of SPPIs at the respective service industries facilitates policy agencies' response to potential cost push issues that may affect economic growth or consumer prices downstream. For example, the Sea Freight Transport Price Index and Warehousing and Storage Price Index are used by policy agencies to study their linkages with consumer price movement in food prices during the COVID-19 pandemic.

TABLE I
PRODUCER PRICE INDICES PUBLISHED BY THE DEPARTMENT OF STATISTICS

International Trade Producer Price Indices for Goods	Producer Price Indices for Services NEW!
Import Price Index	Sea Freight Transport Price Index
Export Price Index	Warehousing and Storage Price Index
Producer Price Indices for Goods	Cargo Handling Price Index
Singapore Manufactured Products Price Index	Freight Forwarding Price Index
Domestic Supply Price Index	Telecommunications Services Price Index
	Computer Consultancy and Information Services Price Index
	Accounting Services Price Index

3) Evaluating Business Competitiveness and International Comparison

Businesses may use the SPPIs to track the movements of prices in their fields to evaluate their competitiveness. Internationally, SPPIs are used by research and marketing firms to provide economic insights, as well as monitor and research producer price trends by geography.

4) Using Price Indices in Contracts

SPPIs are official statistics that provide summary measures of the price movement of selected service industries over time. Although SPPIs are mainly used for price deflation and economic analyses, they are used in business and government contracts to adjust payments and/or charges to account for changes in prices as well.

Developing a Services Producer Price Index

The selection of which SPPIs to develop was conducted in consultation with key users based on several criteria, such as the economic importance of the service industries and availability of alternative price deflators. Chart 1 illustrates the order in which the SPPIs were developed. A gradual approach was taken to develop various SPPIs to maximise the use of limited resources,

starting with the Sea Freight Transport Price Index in 2006 (first base year in 2007). The most recent SPPI that was developed is the Accounting Services Price Index, with its first base year in 2017.

Before a price index is compiled and published for use on a regular basis, the index structure has to be carefully designed and suitable service products are identified to ensure that the index meets the needs of its users' for price deflation and monitoring of price trends across time.

The collection of prices of services is more challenging due to the need to identify service characteristics that are price-relevant and distinguishing between similar services. This is in contrast to the collection of prices of physical goods, whose characteristics could be easily defined.

Research on the service industry is first undertaken. Thereafter, the pertinent companies' cooperation is sought for DOS to work closely with so as to identify and collect suitable service products that capture price changes timely and reliably.

Due to the complex and different pricing mechanisms adopted by companies within each service industry, there is no one-size-fits-all survey form template for the companies surveyed under the selected service industry.

CHART 1
DEVELOPMENT OF DOS'S SPPIs



CHART 2

FOUR-STEP PROCESS OF DEVELOPING A NEW SPPI



Chart 2 illustrates the four-step process of developing a new SPPI. The development phase takes more than two years as time is needed to understand the local industry's practices in pricing their services; determine the detailed weights data and subsequently engage the companies' respondents to identify suitable services; as well as streamline and collect their prices over a period of 15 to 18 months.

Throughout the process, data analysis and editing are performed to test several index structures models and compilation methods, to ensure that the eventual price index is robust and representative of the industry trends. It is important to note that the development timeline may vary, depending on the complexity of the service industry.

Rebasing a Services Producer Price Index

Rebasing exercises are conducted periodically to update the weights and ensure that the baskets

of service products remain representative of the changing production patterns in the service industry. This ranges from four to six years, depending on market conditions.

The process of rebasing the index is similar to developing a new SPPI, as it is necessary to study the industry for possible emerging service products or new pricing mechanisms arising from digitalisation or other disruptive technologies.

An industry survey is conducted to obtain the latest weights, followed by preliminary price surveys (covering new establishments and service products), which run concurrently with the routine price surveys for at least 12 months to compile the new base year prices.

The price index prior to the new base year can be linked to the new series to facilitate comparison across base years via a linked coefficient that is calculated based on data from the year when both series are compiled.

Dissemination of SPPI Report

The SPPI report is published on the 25th day of the 3rd month after the reference quarter, or the next working day if it falls on a Saturday, Sunday or Public Holiday.

Access the report via: SingStat Website (www.singstat.gov.sg/publications/economy/services-producer-price-indices)

Download SPPI data via: www.singstat.gov.sg/tablebuilder