

Introduction

The Services Producer Price Index (SPPI) is compiled to measure the average change in the prices of services charged by the local services industry in Malaysia. In addition, the SPPI serves as a deflator in the compilation of the Volume Index of Services (IoS) and Gross Domestic Product (GDP).

The concepts and methodology applied in compiling the SPPI are based on the Methodological Guide for Developing Producer Price Indices for Services, published by the Organisation for Economic Co-operation and Development (OECD), Eurostat, and the joint Eurostat-OECD Task Force.

Data for the SPPI are obtained from the Quarterly Services Producer Price Survey. The survey was first introduced in 2008, initially covering the Transportation subsector. Coverage was subsequently expanded to include the Information and communication subsector (2011); Real estate activities and Professional subsectors (2012); and Education, Health, Accommodation and food & beverage services activities, and Arts, entertainment and recreation subsectors (2013).

The survey sample comprises selected establishments from the same industries covered under the Quarterly Services Survey conducted by the Department of Statistics Malaysia (DOSM), with a total of 3,773 businesses included.

SPPI Price Collection

The price collection of services producer refers to the actual transaction prices, not the list prices. The prices are inclusive of discounts, surcharges and rebates charged to customers but does not include all types of tax imposed on the type of services.

Definition

The definition adopted in the SPPI compilation is based on recommendations of Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0.

Updating Basket

Selection of Industries

In line with the completion of the Economic Census 2016 (reference year 2015), the updating of the basket is a standard procedure to ensure the items, basket and industries reflect the latest statistics structure. Starting 2018, the Services Producer Price Index (SPPI) has updated through the adoption of a revised basket and weighting structure, reflecting the latest composition of the services sector as captured in the Economic Census 2016.

The selection of industries is based on their contribution to total output as reported in the Economic Census 2023. Overall, the selected industries account for 75.3 per cent of the services sector within the SPPI coverage.

The weights for the updated SPPI (2010=100) are derived from the Economic Census 2016. The SPPI (2010=100) continues to be compiled using the fixed basket approach, while index compilation applies the Chain-Linked index method, allowing for basket updates without changing the base year.

The Laspeyres chain index method is used in the calculation of the SPPI, with the previous quarter serving as the linkage period. The updating of the SPPI basket (2010=100) is based on the findings of the Economic Census 2016.

It is important to distinguish between rebasing and basket updating. Rebasing involves only a change in the base period and is a mechanical process undertaken to facilitate comparison and presentation of the series. In contrast, updating the SPPI basket involves revising the existing basket (2010=100) by updating the products and their corresponding weights to form a new basket (2022=100).

Products are selected based on their relative importance and contribution to the industry's sales value and only products with significant weights are selected for inclusion in the SPPI basket.

Updated SPPI Basket (2010=100) and linking using the following formula:

$$p_{t/10}^{ch} = p_{t/15}^{new} \times \left(\frac{p_{Q4\ 17/10}^{previous}}{p_{Q4\ 17/15}^{new}} \right)$$

where:

$p_{t/10}^{ch}$ = is a chain index that measures price changes from 2010 to any period t

$p_{t/15}^{new}$ = is a new series of composite index comparing prices at any period t to fourth quarter 2017

$p_{Q4\ 17/10}^{previous}$ = is the previous series of composite index comparing prices of fourth quarter 2017 to 2010 prices

$p_{Q4\ 17/15}^{new}$ = is a new series of composite index comparing prices of fourth quarter 2017 to 2015 prices

Weights

The item weights are based on the proportion of their contributions to the total value of output in the economy. The weights by MSIC and commodity sections are as follows:

Weights of SPPI by Subsector

Subsector	Weights	
	2010	2015
Transportation	24.2	22.4
Accommodation and food & beverage service activities	22.9	20.0
Information & communication	29.3	39.6
Real estate activities	0.5	0.5
Professional	5.6	4.7
Education	4.5	3.6
Health	5.3	4.3
Arts, entertainment & recreation	7.7	4.9
Total	100.0	100.0

Subsector Covered

There are eight (8) sub-sectors covered and the breakdowns by industries are as follows:

Transportation	
49230	Freight transport by road
50121	Transport of freight overseas & coastal waters, whether scheduled or not
51101	Transport of passenger by air over regular routes & on regular schedules
51201	Transport freight by air over regular routes & regular scheduled
52214	Highway, bridge & tunnel operation services
52291	Forwarding of freight
53100	National postal activities
53200	Courier activities other than national post activities
Accommodation and Food & Beverage Service Activities	
55101	Hotel & hotel resorts
56101	Restaurants & restaurants cum night clubs
56102	Cafeterias / canteen
56103	Fast-food restaurants
56106	Food stalls / hawkers
56210	Event / food caterers
56301	Pub, bars, discotheques, coffee-houses, cocktail lounges & karaoke
56302	Coffee shops
Information & Communication	
61101	Wired telecommunication services
61102	Internet access providers by the operator of the wired infrastructure
61201	Wireless telecommunication activities services
61202	Internet access providers by the operator of the wireless infrastructure
62010	Computer programming activities
62021	Computer consultancy
63112	Data processing activities
63120	Web portals

<i>Real Estate Activities</i>	
68201	<i>Activities of real estate agents & brokers for buying, selling & renting of real estate</i>
68202	<i>Management of real estate on a fee or contract basis</i>
<i>Professional</i>	
69100	<i>Legal activities</i>
69200	<i>Accounting, bookkeeping & auditing activities; tax consultancy</i>
71102	<i>Engineering services</i>
<i>Education</i>	
85102	<i>Pre-primary education (Private)</i>
85104	<i>Primary education (Private)</i>
85212	<i>General school secondary education (Private)</i>
85302	<i>College and university education (Private)</i>
85421	<i>Music & dancing school</i>
85491	<i>Tuition centre</i>
<i>Health</i>	
86101	<i>Hospital activities</i>
86201	<i>General medical services</i>
86202	<i>Specialized medical services</i>
86203	<i>Dental services</i>
86901	<i>Dialysis centre</i>
86902	<i>Medical laboratories</i>
<i>Arts, Entertainment & Recreation</i>	
92000	<i>Gambling & betting activities</i>
93113	<i>Equestrian clubs</i>
93116	<i>Golf courses</i>
93117	<i>Bowling centres</i>
93118	<i>Fitness centres</i>
93210	<i>Activities of amusement parks & theme parks</i>
93297	<i>Cyber café / internet centre</i>

Index Calculation

Base Price

Base price is an average of prices for the particular services for a period of four quarters in 2010.

Index Formula

The Laspeyres base-weighted price formula is used to compile the SPPI:

$$\frac{\sum_{i=1}^n p_i^t q_i^s}{\sum_{i=1}^n p_i^s q_i^s} = \sum_{i=1}^n \frac{p_i^s q_i^s}{\sum_{i=1}^n p_i^s q_i^s} \times \frac{p_i^t}{p_i^s} = \sum_{i=1}^n w_i^s \times \frac{p_i^t}{p_i^s}$$

where:

$$w_i^s = \frac{p_i^s q_i^s}{\sum_{i=1}^n p_i^s q_i^s} = \text{Relative value weights}$$

$$p_i^t = \text{Current period prices}$$

$$p_i^s = \text{Base period prices}$$

$$q_i^s = \text{Base period quantities}$$

$$n = \text{Number of items}$$

The formula selected has an advantage of determining a specific price or group of prices, which is responsible for any changes in the aggregate index.

Price Relative

The price relative for each type of service provides the basic level for the calculation of higher level indices. It is calculated as percentage ratios of the current prices to those prevailing in the base period and it is obtained by dividing the current prices by the corresponding base year prices and multiply them by 100. The geometric mean of these price relatives is obtained to form indices at group level.

Aggregated Index

The overall SPPI is built up progressively from Industry level (5 digit) to Class (4 digit), Group (3 digit), Division (2 digit) and Section (1 digit).

Percentage Change of Index

The percentage change of the index is calculated based on the following formula:

$$y_t = \frac{I_t - I_{t-1}}{I_{t-1}} \times 100$$

where:

- y_t = refers to index percentage change
- I_t = is the index at time t (current period)
- I_{t-1} = is the index at time $t-1$ (previous period)

Example:

Index Point Change		Percentage Change
Current index, I_t	116.5	Current index minus previous index, divided by previous index, multiplied by one hundred
Previous index, I_{t-1}	116.1	
Equal to	0.4	$= \frac{116.5 - 116.1}{116.1} \times 100$ $= 0.3\%$

Quality Control

Validation process and quality-control procedure on the prices received are carried out to evaluate whether the prices are reasonable, consistent and accurate. The checking procedures include comparing current prices against the previous prices for the same respondents as well as with prices reported by other respondents for the same type of services. Prices that display unusual variations are clarified with respondents to ensure the accuracy.

Confidentiality Requirements

The data used for the compilation of Services Producer Price Index have been collected under the provisions of the Statistics Act 1965 (Revised-1989). The Act stipulates that the contents of individual return are confidential. In conformity with the stipulations of this Act, only aggregated figures are published.

Revisions

Revisions will be made to the published figures based on the latest data available.

Symbols

n.a : Not applicable

0.0 : No change

Q : Quarter

QoQ : Quarter-on-Quarter

YoY : Year-on-Year