

Rebasing of Retail Sales and Food & Beverage Services Indices

By

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Introduction

The Singapore Department of Statistics has recently completed the rebasing of the Retail Sales Index (RSI) and Food & Beverage Services Index¹ (FSI) to reference year 2010.

The RSI and FSI are rebased at regular intervals to reflect changes in the structure of retail trade and food & beverage (F&B) services industries. During the rebasing exercise, the methodology, coverage and weights are reviewed and updated.

This article presents an overview of the rebasing exercise and highlights the changes in the weighting patterns and trends of the 2005-based series compared with the 2010-based series.

What RSI and FSI Measure

The RSI and FSI measure the monthly movements in retail and F&B sales recorded by retail and F&B services establishments respectively. Retail establishments sell merchandise directly to the consumers while F&B services

establishments sell prepared food and drinks for in-premises consumption or on a take-away basis.

The RSI and FSI are presented at both current prices and constant prices. The indices at current prices measure the changes in sales values arising from changes in both price and quantity.

By removing the price effect, the indices at constant prices measure the changes in the volume of economic activity.

Sampling Methodology

The data used for the compilation of the RSI and FSI are primarily obtained from the Monthly Retail Sales Survey (RSS) and Monthly Food & Beverage Services Survey (FSS) conducted by the Department.

The establishments covered in RSS and FSS are selected based on stratified random sampling.

The sampling frame is obtained from the Department's Commercial Establishment Information System (CEIS). The sampling frame was first stratified by industry

1 Previously known as the Catering Trade Index (CTI).

groups; each industry group was then further stratified by size of operating receipts into three size strata (large, medium and small).

All establishments in the large size stratum were selected with certainty whereas the establishments in the medium and small size strata were subject to random sampling.

Within each industry group, the Lavallée-Hidiroglou (1988) algorithm was used to determine the size stratum boundaries as well as the optimal sample size for a required level of precision.

Comparison of Weighting Patterns in Old and New Series

The weight for each industry reflects its relative importance in the overall retail trade or F&B services sector.

The weights are computed based on the retail or F&B sales of the respective industries as obtained from the Annual Surveys of Retail Trade or F&B Services for reference year 2009.

Table 1 presents the old and new weights for RSI categories. The weights of "Department Stores", "Wearing Apparel

TABLE 1 Weighting Pattern of RSI in 2005-Based & 2010-Based Series

RSI Categories	2005=100	2010=100
Total	10,000	10,000
Department Stores	1,322	1,525
Supermarkets	411	453
Provision & Sundry Shops	536	475
Food & Beverages	200	201
Motor Vehicles	3,449	2,465
Petrol Service Stations	456	508
Medical Goods & Toiletries	332	415
Wearing Apparel & Footwear	574	746
Furniture & Household Equipment	755	817
Recreational Goods	190	184
Watches & Jewellery	607	770
Telecommunications Apparatus & Computers	366	556
Optical Goods & Books	344	367
Others	458	518

& Footwear”, “Watches & Jewellery” and “Telecommunications Apparatus & Computers” have increased from 29 per cent in the 2005-based series to 36 per cent in the 2010-based series.

In comparison, the share of “Motor Vehicles” has decreased from 34 per cent in 2005-based series to 25 per cent in 2010-based series.

Table 2 compares the old and new weights for FSI categories. The weights of “Restaurants” and “Other Eating Places”

have increased in the 2010-based series while the weights of “Fast Food Outlets” and “Food Caterers” have decreased during the same period.

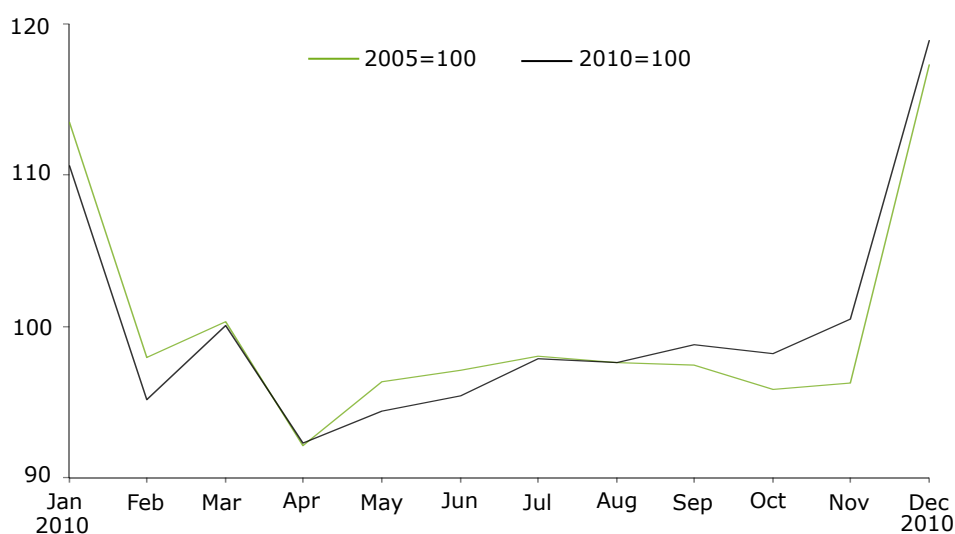
Comparison of Trends in Old and New Series

Chart 1 compares the overall RSI at current prices of the 2005-based and 2010-based series during January to December 2010. The old and new series exhibit similar trend. However, the new series shows lower turnover from January to

TABLE 2 Weighting Pattern of FSI in 2005-Based & 2010-Based Series

FSI Categories	2005=100	2010=100
Total	1,000	1,000
Restaurants	360	391
Fast Food Outlets	136	126
Food Caterers	148	114
Other Eating Places	356	369

CHART 1 RSI at Current Prices



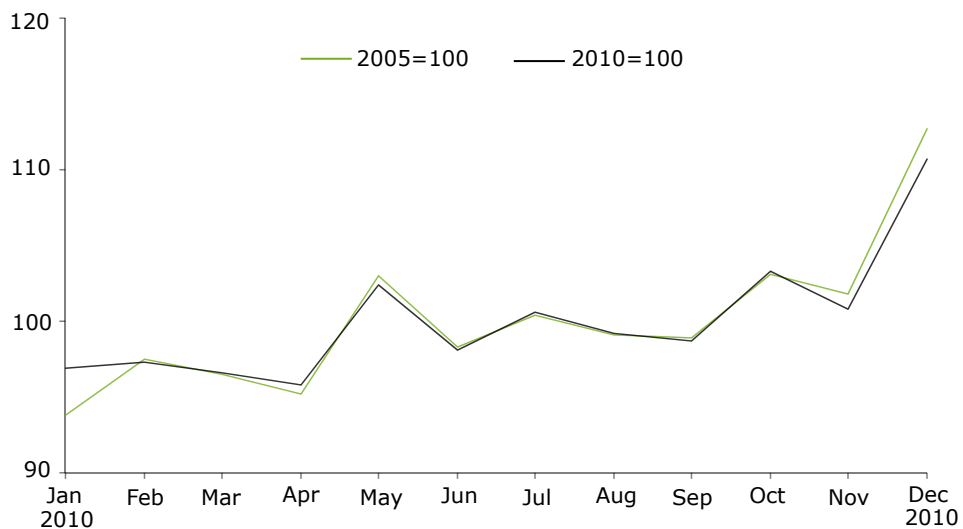
June 2010 and higher turnover from July to December 2010 compared to the old series.

Chart 2 shows the overall FSI for new series (base year 2010) and old series (base year 2005). The two series also present similar trend.

Conclusion

The RSI and FSI have been rebased to reference year 2010 with updated weighting patterns and improvements in coverage and methodology.

CHART 2 FSI at Current Prices



More information is available from the Information Paper on "Re-basing of the Retail Sales and Food & Beverage Services Indices (2010 = 100)". The paper is available for downloading from the SingStat website at:

<http://www.singstat.gov.sg/pubn/papers/economy/ip-b22.pdf>

The Lavallée-Hidiroglou (1988) algorithm has been used to improve the sampling efficiency for the Annual Survey of Services (AS). A discussion on the improvement in sampling design of the AS is available from the March 2008 issue of the Statistics Singapore Newsletter. Download the article on "Improving Sampling Efficiency for the Annual Survey of Services" via:

<http://www.singstat.gov.sg/pubn/ssn/archive/ssnmar2008.pdf>