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SPPI for Retail Services in Canada

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1. Introduction

Services industries comprise approximately two-thirds of the Canadian economy and business services represent almost 40% of gross domestic product compared to about 17% for government services and 11% for personal services. Despite their importance, there is a significant gap in the Canadian economic statistical system of price indexes for the business services sector. This gap affects the quality of real output and productivity change estimates for this sector.

In 2006-07, Statistics Canada began a significant expansion of its coverage of the business services sector targeting roughly 30 broad business services categories. The project has made significant progress and several indexes were published in 2009-2010. The Retail Services Price Index will be published in the fall of 2010.

2. Definition of the Service Being Collected

Retail is a vital part of the Canadian economy and the services that retailers provide are crucial for an effective and efficient flow of goods through the distribution process. The Retail Trade Price Report survey collects prices of product/service transactions essential to the creation of a price index for the retail sector. The Retail Services Prices Index (RSPI) measures the movement of the prices for the services provided by retailers.

The retail trade sector comprises establishments primarily engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

The retailing process is the final step in the distribution of merchandise; retailers are therefore organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers, that is, store and non-store retailers. The Retail Trade Price Report covers only store retailers.

Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customers. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and



institutional clients. These include establishments such as office supplies stores, computer and software stores, gasoline stations, building material dealers, plumbing supplies stores and electrical supplies stores.

In addition to selling merchandise, some types of store retailers are also engaged in the provision of after-sales services, such as repair and installation. For example, new automobile dealers, electronic and appliance stores and musical instrument and supplies stores often provide repair services, while floor covering stores and window treatment stores often provide installation services. As a general rule, establishments engaged in retailing merchandise and providing after sales services are classified in this sector. Catalogue sales showrooms, gasoline service stations, and mobile home dealers are treated as store retailers.

Non-store retailers, like store retailers, are organized to serve the general public, but their retailing methods differ. The establishments of this subsector reach customers and market merchandise with methods such as, the broadcasting of infomercials, the broadcasting and publishing of direct-response advertising, the publishing of traditional and electronic catalogues, door-to-door solicitation, in-home demonstration, temporary displaying of merchandise (stalls) and distribution by vending machines.

The methods of transaction and delivery of merchandise vary by type of non-store retailers. For example, non-store retailers that reach their customers using information technologies can receive payment at the time of purchase or at the time of delivery, and the delivery of the merchandise may be done by the retailer or by a third party, such as the post office or a courier. In contrast, non-store retailers that reach their customers by door-to-door solicitation, in-home demonstration, temporary displaying of merchandise (stalls) and vending machines typically receive payment and deliver the merchandise to the customer at the time of the purchase.

The non-store retailer subsector also includes establishments engaged in the home delivery of products. This includes home heating oil dealers and newspaper delivery companies.

3. Pricing Unit of Measure Collected

The definition of the pricing methodology for the retail service is the margin price per unit. The margin price per unit is derived by subtracting the average purchase price per unit from the average selling price per



unit. These prices reflect real transactions measured monthly, but collected on a quarterly basis.

Retailers are asked to price two products for up to each of six commodity groups. The selected products should be representative of the retail activity and based on the sales revenue generated by these products. The items should be high volume products that are sold year round. Respondents are asked to continue reporting for these products each quarter. However, when a product becomes obsolete, the respondent is asked to provide a comparable product replacement. To produce a constant quality series, retailers are asked to provide product specifications for each product reported (refer to section 3.1). The detailed specifications facilitate the identification and tracking of a product over time.

3.1 Main Variables Used to Price the Retail Service

The main variables used to price the retailing service are:

- **Product Description** – Identifies a product, its color and/or other product attributes which can be used to uniquely identify and track the product or service reported.
- **Product Manufacturer or Label** – Identifies the manufacturer of the product, service or SKU (Stock Keeping Unit).
- **Product Code** - Can include the PLU (Price Look-Up code), UPC (Universal Product Code) or SKU.
- **Size/Weight** – Refers to the specific size or weight measurement for the product or service reported.
- **Unit of Measure** – Refers to a particular quantity or size, defined and adopted by convention, with which other quantities of the same kind are compared (dozen, foot, kg, liter, etc.).
- **Retailing Activities** – A list of activities performed by retailers for the products or services chosen. Price margins may fluctuate due to (perceived or actual) value-added by the retailer in performing all or any of these activities.



- **Average Vendor Price** – The average vendor price is defined as the cost to the retailer to purchase a product/service from the supplier, excluding all taxes and rebates.
- **Average Retail Price** – The average retail or selling price is defined as the cost to the consumer as charged by the retailer, excluding taxes and freight.
- **Main Reason for Vendor Price Change** – Identifies the reason for a change in the vendor (purchase) price. Reasons can range from a change in supplier, change in product, inflation or exchange rate fluctuations.
- **Main Reason for Retail Price Change** - Identifies the reason for a change in the retail (selling) price. Reasons can range from a change in the retailing service offered, change in supplier, inflation or exchange rate fluctuations.

4. Retail Market Conditions and Constraints

4.1 Size of Retail Industry in Canada

Retailing is a multi-billion-dollar industry in Canada, with operating revenues totaling \$468.5 billion in 2008, up 4.5% from 2007. \$13.9 billion or 3.0% of these operating revenues were generated by non-store retailers (see Table 1).

In 2008, the total number of retail establishments in Canada numbered approximately 162,111. Miscellaneous store retailers, clothing stores, convenience and specialty food stores, gasoline stations, pharmacies and personal care stores, and used and recreational motor vehicle and parts dealers represented 57.5% of all retail establishments in Canada. New car dealers, supermarkets, gasoline stations, general merchandise stores and used and recreational motor vehicle and parts dealers accounted for \$282.8 billion or 60.4% of all retail operating revenues in 2008.

Between 1999 and 2008 retail store sales in Canada grew at an annual compound rate of about 5.4%.¹ in 2009 the retail sector

¹ **Source:** Statistics Canada, CANSIM, table No. 080-0011



employed approximately 2.0 million Canadians or 11.9% of the total working population.²

In 2009, the Gross Domestic Product (GDP) of the retail sector totaled \$74.6B or 6.2% of Canada's total (*all industries*) gross domestic product. If we include wholesale trade, the distributive trades sector accounted for approximately 11.8% of the *all industries* GDP.³

Table 1: Number of Stores by Trade Group in Canada (based on the North American Industry Classification System) ⁴

Trade Group	NAICS	# of Stores	%	Operating Revenue (000's)	%
New car dealers	441	4,037	2.49	81,161,536	17.32
Used and recreational motor vehicle and parts dealers	441	12,260	7.56	22,657,767	4.84
Furniture stores	442	3,828	2.36	10,050,837	2.15
Home furnishings stores	442	5,339	3.29	5,877,630	1.25
Computer and software stores	442	2,924	1.80	2,162,240	0.46
Home electronics and appliance stores	442	6,862	4.23	13,925,922	2.97
Home centres and hardware stores	444	3,842	2.37	21,949,848	4.68
Specialized building materials and garden stores	444	4,941	3.05	6,745,846	1.44
Supermarkets	445	7,970	4.92	72,135,970	15.40
Convenience and specialty food stores	445	16,716	10.31	13,907,988	2.97
Beer, wine and liquor stores	445	3,770	2.33	16,754,083	3.58
Pharmacies and personal care stores	446	14,022	8.65	31,546,499	6.73
Gasoline stations	447	16,127	9.95	54,196,011	11.57
Clothing stores	448	16,890	10.42	18,650,534	3.98
Shoe, clothing accessories and jewellery stores	448	9,089	5.61	6,156,482	1.31
Sporting goods, hobby, music and book stores	451	9,059	5.59	11,853,755	2.53
General merchandise stores	452	7,307	4.51	52,632,213	11.23
Miscellaneous store retailers	453	17,128	10.57	12,276,966	2.62
Non-store retailers	454			13,887,277	2.96
Total		162,111	100.00	468,529,404	100.00

² **Source:** Statistics Canada, CANSIM, table No. 282-0008

³ **Source:** Statistics Canada, CANSIM, table 379-0027

⁴ **Source:** Statistics Canada, CANSIM, table No. 080-0011 and No. 080-0012



4.2 Special Conditions and Restrictions

Margin pricing introduces a new dimension to index construction as margin prices may behave very differently from gross retail sales prices and must be treated accordingly. The retail industry in Canada, while seasonal in nature is also influenced by price volatility and fashion trends.

There are a few issues associated with seasonality and seasonal goods that must be considered when pricing retail services. The first is the importance of including seasonal goods at the appropriate time as the truncation of seasonal items could distort price measurement. One way to avoid this is to stress to survey respondents that product selection should reflect an annual period. Take for example, a respondent reporting prices for men's fall/winter dress pants. Reporting for this product starts at the beginning of the fall/winter season with high margins. The margins fall to mid-level by the spring and are sold at a loss in the summer. The respondent has followed this same pattern for the past two years. The price index reflects this seasonal volatility, but one must be careful and avoid substituting a non-comparable product at the end of the previous item's season as this would break the series and cause a downward bias on the index. To minimize the downward bias and deal with cases like this, it is preferable to find comparable substitutions to link in.

The second issue relates to setting the base price for a good. When establishing a new series, re-pricing an item or taking a non-comparable substitution, sale prices or near-zero prices should be avoided. Sale prices and prices approaching zero can cause fluctuations in the price relative in the month that the price is first encountered and again in the month that the price reverts to normal. Consider the example where a retailer reports a margin price of \$0.02 at the end of the year for cucumbers. The following month the margin price returns to \$0.32, resulting in a price relative of 16. Under normal circumstances when the margin price approaches so close to zero we would generally exclude this price from estimation. If the margin price had reached \$0.00, it would have been automatically excluded as zero or negative margins are excluded from the index calculations.

Clearance sales can also distort the price index. As a case in point, a brand of computer laptop entered the sample with a margin



price of \$186 per unit. By the third quarter that margin fell to \$110, being marked down as an end-of-life clearance item. The following month, the margin price fell again to \$34. By the end of the year, the margin price was negative and in the first quarter of 2010 a replacement product was received. For the year that this product was in the sample, its margin price declined 80% from \$186 to \$34 (the negative margin being excluded from estimation). While high-tech goods are always coming down in price (and implicitly, margins are becoming narrower), it is doubtful that such a large annual decline is representative of meaningful economic activity. Clearance prices in general are not sustainable over the long run for any business, and as such are viewed as one-time or special events – they do not reflect trends in pricing over any significant period of time. Ideally, we would substitute products out of our sample before they become clearance items. When it is not possible to do this, we try to find a comparable substitution to link into the index.

Margin prices are expected to be volatile. An item with a gross retail selling price of \$10.00 and a margin price of \$1.00 that has a \$.50 (5%) increase in the gross retail selling price results in a 50% increase in the margin price of this item. The volatility is caused by the very small value that a margin price has relative to the gross retail selling price. A small change in a vendor or retail price can cause a significant movement of the price index. While margin prices can indeed be volatile, margin volatility is sometimes indicative of other problems such as product mix issues.

While high fashion items account for a significant portion of retail sales, these items are often only available for a few months and then they must be replaced. To minimize fluctuations in the margin prices it is important that the respondent be able to provide a comparable product substitution with a comparable margin price serving the same market niche (children's clothing, for example).

Other factors such as globalization, the integration of advanced technologies (e-commerce), and the adoption of innovative practices (merchandising) have aided the growth and diversity of the retail industry in Canada.



5. Standard Classification Structure

The main classification of retail activity is by industry. The Retail Price Report is based on the definition of retail trade under NAICS 44-45 (North American Industry Classification System). The North American Industry Classification System (NAICS) is an industry classification system developed by the statistical agencies of Canada, Mexico and the United States.

The retail sample was selected using Statistics Canada's Business Register. The frame for the Retail Trade Price Report (limited to NAICS 44 and 45) corresponds to the frame used for the Monthly Retail Trade Survey (MRTS). A probability sample of 2200 retail units was selected based on establishment revenue and stratified by NAICS. Each NAICS stratum was further stratified by *take-all* (large) and *take-some* (small) units.

The sampling design involved 3 stages of sampling:

- **1st Stage** – Sampling of business units with probability proportional to size (revenue).
- **2nd Stage** – Sampling of commodity groups with probability proportional to size (sales) if the first-stage unit belongs to the Quarterly Retail Commodity Survey (QRCS), otherwise with a judgmental sample.
- **3rd Stage** – Sampling of items according to a judgmental sample (of representative items), to be determined by the respondent.

The publishing target for the Retail Services Price Index (RSPI) will be at the 5-digit level for NAICS 44-45 (refer to Appendix A), excluding NAICS 4411, 4412, 4541, 4542, and 4543. Automobile and Other Motor Vehicle dealers, and Non-Store retailers are currently not in scope for the Retail Trade Price Report, but may be addressed at a later date.

At the present time, retail data are not published at the product level, but NAPCS (North American Product Classification System) coding has been a "joint project of the national statistical agencies of Canada, Mexico and the United States. The purpose of the project has been to develop a unified standard for products which would allow comparisons of data among the three participating countries. It will also facilitate integration



of data at Statistics Canada.”⁵

6. Evaluation of Standard vs. Definition and Market Conditions

The classification structure (NAICS) used to produce the Services Producer Price Indexes (SPPI), and in particular the Retail Services Price Index (RSPI), is consistent with that used by the turnover surveys at Statistics Canada (Annual Retail Trade Survey, Monthly Retail Trade Survey and its supplement the Quarterly Retail Commodity Survey). There are no special or additional classifications for the RSPI program.

Statistic Canada's Business Register is the sample source for both the RSPI and the turnover surveys. This common sampling source facilitates sample clean-up and comparison and it also ensures that industry level estimates of price change and turnover are directly comparable.

As well, the first stage sampling methodology was modified to incorporate a sample overlap between the Retail Trade Price Report and the Quarterly Retail Commodity Survey (QRCS). The sample overlap minimized research and pre-contact costs and facilitates comparability of data between the two surveys.

7. National Accounts Concepts and Measurement Issues for the Area Related to GDP Measurement

Several programs in the Canadian System of National Accounts cover the retail trade sector. These programs are: the Monthly Industry GDP program, the Provincial Industry GDP program, and the Input-Output programs in both current and constant prices. As well, retail sales are an important data source for the Personal Expenditure series in the Quarterly Income and Expenditure Accounts. This section will focus entirely on the concepts of the industry programs, notably the Monthly industry GDP program and the Input-Output programs. Since the conceptual framework and data requirements of the Provincial Industry GDP program resemble that of the Monthly GDP program, it is not discussed explicitly here.

⁵ Source: <http://www.statcan.gc.ca/subjects/standard/napcs/introduction-eng.htm>; page 1.



7.1 Annual Industry GDP

Annual Input Output Accounts in Current Prices

The Input Output (IO) Accounts are the most detailed representation of the Canadian economy from which the benchmark values of GDP in the Canadian System of National Accounts are computed.

The IO tables are compiled using a wide variety of data sources including annual industry turnover data collected by Statistics Canada. The balancing process ensures that both the product and the industry identities⁶ are respected. From the balanced current price IO tables, GDP can be estimated in three different ways: as the sum of incomes, the sum of final expenditures or using the value added approach.

The retail sector is presented as one industry in the Canadian IO accounts. The main output of the industry is the retail margin which is defined as the sales of goods purchased for resale less the cost of goods purchased for resale. It should be noted that the retail industry also produces other products that are also part of its gross output. Outputs, intermediate consumption and value added (wages, surplus) are derived from variables available from the Annual Retail turnover survey.

The Annual Retail turnover survey and other data sources are also used to compute the retail margin by product/commodity. These margins form the basis of the retail margin table. The retail margin table along with other margin tables (wholesale, transportation and tax margins) are an important element of IO tables because they provide the link between the producer price (modified basic prices) valuation and the purchaser price valuation.

⁶The IO tables contain two sets of interrelated accounts: the industry accounts and the commodity (or product) accounts. From these accounts, two basic identities can be derived:

- Product Identity: $\text{Output} + \text{Imports} = \text{Intermediate Consumption} + \text{Final Consumption Expenditure} + \text{Gross Capital Formation} + \text{Exports}$
- Industry Identity: $\text{Output} = \text{Intermediate Consumption} + \text{Gross Value Added}$



Annual Input Output Accounts in Constant Prices

The constant price IO tables are estimated by deflating the current price IO tables using a variety of available deflators such as the Industrial Product Price Index for manufactured goods or the Consumer Price Index for final consumer expenditures. GDP at constant prices is estimated using the double deflation method (the difference between deflated gross output and deflated intermediate inputs).

Due to the lack of deflators for the retail margin, the retail margin cannot be deflated directly and an alternative margin rate methodology is used. The margin rate, defined as the ratio of the value of the margin to the basic value of the commodity where the margin is applied, is calculated in current prices. The average margin rates (between the base year and the current year) are then applied to the constant price basic value of the commodity to compute the constant dollar margin estimate. An implicit price index is calculated by dividing the current dollar sum of input and final demand retail margins by the sum of their constant dollar retail margins. The implicit index is also used to validate the results of the deflation exercise.

It should be noted that the current and constant price IO tables in Canada are compiled in an iterative process where current and constant price estimates are confronted and reconciled. The constant dollar GDP estimates are the basis for the Monthly Industry GDP program which is based on a projection methodology.

The methodology used to compile national input-output tables at constant prices is documented in ***A Guide to Deflating the Input-Output Accounts: Sources and Methods – 2001***.

7.2 Monthly industry GDP

The monthly measures of industry GDP are projections of the annual estimates of constant price GDP at basic prices by industry. In the retail trade sector, "changes in constant price output are used as indicators of the growth rates in constant price value added. The movement in constant price output is assumed to be represented by the month-to-month growth rates in constant price sales by retailers. Current price sales by retailers (from the monthly turnover survey) are deflated using weighted aggregates of Consumer Price



Indexes (CPI) of the various commodities traded. Weights are shares of gross sales by retailers, taken from the Quarterly Retail Commodity Survey by Statistics Canada. An adjustment is made for changes in retail sales tax rates whenever necessary.”⁷

7.3 Issues with Current Methodology

There are several issues with the current methodology for estimating annual industry GDP for the retail sector. These are:

- A direct index is not used to deflate the retail margin and an implicit index and a margin rate methodology has to be used which may not be as accurate.
- The retail margin ratio used in the calculation is based on current dollar estimates. In all likelihood these won't be the same as the constant dollar estimates.

7.4 Impact of New RSPI on Current Methodologies

While a significant amount of analysis remains, the Retail Services Price Index (RSPI) is a new data source that could impact the System of National Accounts (SNA) methodology for estimating GDP in all of its industry GDP programs. These changes in methodology could potentially impact GDP estimates because there are significant differences between what is currently used by the SNA (currently there are no direct or implicit price indexes for retail so real output must be estimated indirectly) and the RSPI data.

8. Quality Assurance Framework

The pricing methodology for the Retail Trade Price Report is defined as the margin price per unit which represents the price of the retailing service (see pricing formula on next page). The Retail Services Price Index strives to measure the change in the price of the service and not the price of the product. The respondent provides the vendor price and the retail price for a selected product and a margin price per unit is derived from this information. The prices reflect real transactions that are measured

⁷ **Source:** *Gross Domestic Product by Industry: Sources and Methods with Industry Details*, Statistics Canada – Catalogue no. 15-548-XIE, pp 286-287



monthly but collected on a quarterly basis. The margin price is used to deflate the gross margin to get a measure of real retail output.

$$MP^t_{unit} = P^t_{retail\ price/unit} - P^t_{vendor\ price/unit}$$

The price relative is constructed on the margin price $t/t-1$.

The Voorburg Quality Assessment Framework is a score card that measures the quality of a survey by comparing it against several indicators. According to this framework, the overall design of the Retail Trade Price Report is rated as Type A which indicates a solid, quality product (see Table 2 below).

Table 2: PPI Quality Assessment Framework for Retail Trade Price Report

POINTS	CATEGORY and QUESTIONS	SCORE
	1. Shipment Price (Weight = .10)	
	<i>Select a. or b.</i>	
0	a. Price represents order pricing, actual price at shipment may well be different.	
100	b. Price represents the completion of service or a proxy measure for the completed transaction.	X
	2. Representative of Current Period Production (Weight = .10)	
	<i>Select a. or b.</i>	
50	a. Emergence of new product lines or critical new product features has not occurred since the index reference period or since sample augmentation last done.	X
0	b. Emergence of new product lines or critical new product features has occurred since the index reference period or since sample augmentation last done.	
	<i>Select c. or d.</i>	
50	c. Product substitution usually occurs when an item becomes obsolete or, if model pricing applies, the models are regularly updated to reflect changes.	X
0	d. Product substitution usually does not occur when an item becomes obsolete or, if model pricing applies, the models are not regularly updated to reflect changes.	
	3. Transaction Price (Weight = .25)	
	<i>Select the one most prevalent in the industry</i>	



100	a. The price is the real transaction price or a list price that can always be assumed to be equal to the transaction price.	X
50	b. The price is a list price not equal to the transaction price.	
100	c. The price is a unit value for a homogeneous group of products.	
50	d. The price is a unit value for a non-homogeneous group of products.	
75	e. The price is a model price.	
50	f. The price is constructed from input cost plus profit and overhead mark-up.	
4. Output Price (Weight = .25)		
<i>Select the one most prevalent in the industry</i>		
100	a. Recorded price reflects an actual transaction or average of actual transactions.	X
75	b. Recorded price reflects a model transaction incorporating the pricing of all features found in an actual transaction.	
50	c. Recorded price reflects a model transaction incorporating the pricing of only some of the features found in an actual transaction.	
50	d. Recorded price reflects some components of a transaction.	
50	e. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of all features found in an actual transaction.	
25	f. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of some of the features found in an actual transaction.	
0	g. Recorded price reflects charge out rates for fixed labor inputs not directly tied to a specific quantity of output.	
5. Timely Measure (Weight = .10)		
<i>Select a. or b.</i>		
50	a. Pricing data reflect the service provision in the current period and are not lagged.	X
0	b. Pricing data are lagged.	
<i>Select c., d., or e.</i>		
50	c. Pricing data reflect an average over the entire period.	X
40	d. Pricing data reflect an average of multiple measurements over a portion of the period.	
25	e. Pricing data reflect a single point in time.	



	6. Constant Quality Maintained (Weight = .20)	
	<i>Select a. or b.</i>	
100	a. Rapid changes to product specification are not expected or, if they are, a good method to explicitly quality adjust is in use.	X
0	b. Rapid changes to product specification are expected and no explicit quality adjustment method is in use.	
	TOTAL	100
	Type A Point Range = Over 90	X
	Type B Point Range = 70 to 90	
	Type C Point Range = Less Than 70	

9. Quality Adjustment Methodologies

The Retail Services Price Index (RSPI) program has been in development for approximately three years and will be published in the fall of 2010. The Retail Trade Price Report collects retail price data at the 5-digit NAICS level and provides detailed industry information.

If there is a change in the level of service provided by the retailer, an initial attempt at valuation includes a discussion with the respondent to see if there is some reasonable and objective value that can be assigned. If this is not possible, then the alternative is to simply link to show no change.

When a product is replaced, an evaluation is carried out to determine whether the new product is a comparable or non-comparable substitution. If the new product serves the same niche market as the old product, then it is considered a comparable substitution and any price change is accepted. If the new product serves a different niche market (eg. replacing a medium grind roast coffee with an organic, fair-trade coffee), then it is considered a non-comparable substitution since the new product no longer services the same niche market with the same basic functionality. Where possible, the quality difference between the two items should be used for quality adjusting the margin price difference; otherwise the item is linked in with no change.

Respondents are asked to provide the reason(s) why a retail or vendor price has changed. Reasons can range from a change in the level or type of service offered, a change in the supplier, exchange rate fluctuations or inflation. The option to specify another reason is available.



Respondents might be contacted for further clarification or follow-up if needed.

The terms or conditions of the retailing service are controlled for by the retailing activities (handling of warranty claims, inventory management, product training, etc.) in order to achieve a constant quality price index. A set of systematized edits and procedures are in place to identify outliers and possible reporting errors. For example, an average price increase or decrease of $\geq 10\%$ for a product triggers an edit and follow-up with the respondent.

10. Evaluation of Comparability with Turnover/Output Measures

The Distributive Trade Division (DTD) at Statistics Canada is responsible for surveys of revenue and expenses (turnover surveys), while the Producer Prices Division (PPD) is responsible for developing and producing the Services Producer Price Indexes (the Retail Services Price Index belongs to this group). The System of National Accounts is responsible for producing estimates of real and nominal GDP and use data from DTD (turnover) and PPD (margin prices) to generate these estimates.

The level of comparability between the Retail Trade Price Report and the turnover surveys is high for several reasons:

- Both surveys use the same industry classification system (NAICS).
- The sample for the Retail Trade Price Report is a sub-sample of the Annual Retail Trade Survey (ARTS) frame which is derived from Statistics Canada's Business Register.
- The first stage probability sampling for the Retail Trade Price Report was modified to incorporate an approximate 50% overlap with the Quarterly Retail Commodity Survey (QRCS). This overlap provided sales data by commodity group for the overlap sample units and permitted targeted second stage probability sampling to the commodity group level. It also facilitates one-to-one data confrontation of the overlap sampling units.

The RSPI and the turnover surveys conduct ongoing coherence analysis to ensure both surveys are tracking economic activity for this service and



that activity makes sense. Analysts from Distributive Trade and the Producer Prices divisions frequently collaborate to confront and discuss outliers or other data anomalies.

The main difference between the surveys is frequency of collection – ARTS is annual whereas prices data are collected monthly on quarterly basis.

11. Summary

The Retail Services Price Index program will be an important information source for Statistics Canada and the availability of commodity price data for the retail sector will greatly benefit our statistics program by:

- Feeding the Statistics Canada research agenda.
- Providing a comprehensive set of retail indicators that will lead to better estimates of real output and productivity.
- Providing information on the behavior of margin prices for retail.
- Helping to answer questions related to the retail sector in Canada.

12. References

- **North American Industry Classification System (NAICS) – Canada (2002)** Catalogue no. 12-501-XPE2002001.
- **A Guide to Deflating the Input-Output Accounts: Sources and Methods - 2001**, Statistics Canada – Catalogue no. 15F0077GIE, pp 20-21.
- **Gross Domestic product by Industry: Sources and Methods with Industry Details**, Statistics Canada – Catalogue no. 15-548-XIE, pp 286-287.
- **Guide to the Income and Expenditure Accounts**, Statistics Canada – Catalogue no 13-017, p119, paragraph 7.43 and 7.44.
- **State of Retail: The Canadian Report 2010**, Industry Canada, lu44-81/2010, pp 4-5.
- Barzyk, Fred, 2008: “**SPPI for Wholesale Services in Canada**”. Paper presented at the 23rd Voorburg Group Meeting, Aguascalientes, Mexico.



Appendix A: Breakdown of Retail Detail by NAICS

5-Digit NAICS	Description
44111*	New Car Dealers
44112*	Used Car Dealers
44121*	Recreational Vehicle Dealers
44122*	Motorcycle, Boat and Other Motor Vehicle Dealers
44131	Automotive Parts and Accessories Stores
44132	Tire Dealers
44211	Furniture Stores
44221	Floor Covering Stores
44229	Other Home Furnishings Stores
44311	Appliance, Television and Other Electronics Stores
44312	Computer and Software Stores
44313	Camera and Photographic Supplies Stores
44411	Home Centres
44412	Paint and Wallpaper Stores
44413	Hardware Stores
44419	Other Building Material Dealers
44421	Outdoor Power Equipment Stores
44422	Nursery Stores and Garden Centres
44511	Supermarkets and Other Grocery (except Convenience) Stores
44512	Convenience Stores
44521	Meat Markets
44522	Fish and Seafood Markets
44523	Fruit and Vegetable Markets
44529	Other Specialty Food Stores
44531	Beer, Wine and Liquor Stores
44611	Pharmacies and Drug Stores
44612	Cosmetics, Beauty Supplies and Perfume Stores
44613	Optical Goods Stores
44619	Other Health and Personal Care Stores
44711	Gasoline Stations with Convenience Stores
44719	Other Gasoline Stations
44811	Men's Clothing Stores
44812	Women's Clothing Stores



44813	Children's and Infants' Clothing Stores
44814	Family Clothing Stores
44815	Clothing Accessories Stores
44819	Other Clothing Stores
44821	Shoe Stores
44831	Jewellery Stores
44832	Luggage and Leather Goods Stores
45111	Sporting Goods Stores
45112	Hobby, Toy and Game Stores
45113	Sewing, Needlework and Piece Goods Stores
45114	Musical Instrument and Supplies Stores
45121	Book Stores and News Dealers
45122	Pre-Recorded Tape, Compact Disc and Record Stores
45211	Department Stores
45291	Warehouse Clubs and Superstores
45299	All Other General Merchandise Stores
45311	Florists
45321	Office Supplies and Stationery Stores
45322	Gift, Novelty and Souvenir Stores
45331	Used Merchandise Stores
45391	Pet and Pet Supplies Stores
45392	Art Dealers
45393	Mobile Home Dealers
45399	All Other Miscellaneous Store Retailers
45411*	Electronic Shopping and Mail-Order Houses
45421*	Vending Machine Operators
45431*	Fuel Dealers
45439*	Other Direct Selling Establishments

* NAICS currently not in scope for the Retail Trade Price Report, but may be addressed at a later date.