

**20th MEETING OF THE VOORBURG
GROUP**

**Helsinki, Finland
2005**

Appendix:

**PRODUCER PRICE INDEX FOR COURIERS
AND MESSENGERS**

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1. Introduction

The Couriers and Messengers Services Price Index (CMSPI) is a monthly price index measuring the change over time in prices for courier and messenger services provided by long and short distance delivery companies to Canadian-based business clients. The courier services portion includes deliveries within and between Canadian cities and provinces/territories, as well as some international deliveries. The local messenger portion tracks price change for within-city deliveries only. The CMSPI series is a useful indicator of economic activity for the couriers and messengers services industry.

Development of a producer price index for couriers and local messengers began in June 2003 in Prices Division at Statistics Canada (STC) and was presented at the 18th Voorburg Conference on Service Statistics, held in Tokyo, Japan in October 2003. Development was completed and monthly data from January 2003 to June 2005 were publicly released in July 2005 for the first time.¹

This paper provides an overview of the courier and messenger industry, a discussion of the methodology behind the CMSPI, and actual results. The paper is organized as follows: Business model, Overview of government regulation, Final pricing methodology employed and limitation in the method, Published data and limitations and concerns about the published data, and Analysis of "goodness" of published data.

A. Business model²

The North American Industry Classification System (NAICS) divides the industry into two segments: NAICS 4921 *Couriers* and 4922 *Local Messengers and Local Delivery*. The courier industry comprises establishments primarily engaged in providing air, surface or combined courier delivery services nationally and internationally. Courier establishments of the Post Office are included as well.

The local messengers and local delivery industry is made up of establishments which provide messenger and delivery services of small parcels within a smaller region, such as a city or a metropolitan area. Included are the delivery of: letters and documents, such as legal documents, often by bicycle or on foot; and the delivery of small parcels, such as

¹ Statistics Canada. n.d. *The Daily*, "Couriers and Messengers Services Price Index" <http://www.statcan.ca/>, (released on July 28, 2005).

² Much of the descriptive analysis presented in this section of the paper is derived from Statistics Canada's release "Couriers and local messengers industry 2002 (revised) and 2003 (preliminary)", *The Daily*, <http://www.statcan.ca/>, (released on July 22, 2005).

take-out restaurant meals, alcoholic beverages and groceries, on a fee basis, usually by small truck or van.

The latest set of turnover statistics for this service industry indicate that in 2003, the couriers and local messengers industry included 20,512 establishments providing a variety of services, from letter delivery by bicycle messenger to high-tech equipment delivery in Canada and other countries. The number of establishments increased 4% from 2002.

The industry generated operating revenues of about \$5.7 billion in 2003, with operating expenses totalling nearly \$5.4 billion. The industry's operating margin (the difference between revenues and expenses) was \$370 million, up 13% compared with 2002 and marking an end to two consecutive years of decline.

While couriers accounted for only about 13% of the industry's establishments in 2003, they generated roughly 79% of the total operating revenues. Courier establishments had an average operating margin of about \$102,000, up 15% from 2002.

Local messengers, on the other hand, accounted for 87% of the establishments but only 21% of the industry's operating revenues. They had an average operating margin of about \$5,600, down 17% from 2002. This segment's modest operating margin is mostly due to the fact that it includes a large number of independent contractors and owner-operators who use it as personal income.

The largest expense item for couriers was wages, salaries and benefits (39%), followed by other purchased services (36%). The picture was very different for local delivery services. Their largest expense item was other purchased services (52%), which made up a much larger portion of total expenses than the second-largest item, wages, salaries and benefits (23%). One explanation for this would be that couriers tend to have paid employees while local messengers prefer to use independent contractors or owner-operators.

Large- and medium-size courier and local messenger firms (those with revenues of \$1 million or more) delivered nearly 489 million items, generating just over \$4.3 billion in delivery revenue in 2003. A breakdown by activity shows that second-day and other services earned only 38% of the revenue even though they accounted for 54% of all items delivered. In contrast, next-day and overnight services accounted for more than one-half of the revenue but just 33% of the total items delivered.

Of the overall total, large- and medium-size courier firms moved 86% of all items and earned 88% of the revenue. These firms provided almost all of the two days or more services, gathering virtually all of the revenue earned. They also accounted for most of the next-day and overnight services.

For their part, large- and medium-size local messenger firms moved 14% of all items delivered, while they earned 12% of the overall revenues. These firms specialized mainly in same-day delivery services, taking almost all revenues from these services in 2003.

In the industry as a whole, each item generated an average of \$8.85 in delivery revenue³, up slightly from \$8.43 in 2002. Next-day and overnight services generated the largest average revenue per item among couriers (\$13.68), while second day/other services generated the smallest average revenue per item (\$6.16).

The couriers and local messengers industry depends to a large extent on relatively costly fleets of vehicles and equipment to provide its delivery services. For couriers, most of the vehicles used were cube/step vans (61%), semi-trailers (17%) and other equipment (7%).

For local messengers, the mostly commonly used equipment was automobiles (49%), cube/step vans (33%) and bicycles (8%). Overall, the industry had over 23,000 vehicles and various pieces of equipment in 2003.

In 2003, large firms (those with revenues above \$25 millions) made up about 1% of the total number of businesses in the industry, but earned 71% of the operating revenues. Medium-sized companies (those with revenues between \$1 million and \$25 millions) also accounted for 1% of the total businesses but had 11% of the industry's operating revenues while small firms accounted for the remaining 98% of the industry's businesses, but only 18% of the operating revenue.

B. Overview of government regulation

Currently, there are no regulations in place controlling the pricing policy of this industry. The market, for all intents and purposes, is deemed to be competitive. One point worth noting is that one of the main players in the courier industry, Purolator, is an offshoot of the national postal service (Canada Post) which had to be set up as a separate entity.⁴ The remaining industry participants raised the issue of an unfair competitive advantage that this enterprise would have over independent, privately-owned companies in setting lower (some say unrealistic) prices. It was felt that Canada Post enjoyed a monopoly on postage and mail delivery, allowing for the organization to unfairly subsidize its courier business.

C. Final pricing methodology employed and limitation in the method

Prices

Prices are collected monthly for a detailed set of price specifications covering geography (i.e. origin and destination of service), type of parcel and type of service. The prices collected cover delivery services only. They exclude taxes and assessorial charges (such as customs brokerage, third party billing or call tag services) and other charges (e.g., cargo services, pick-up service charges, trace charges). For couriers, there are two service categories: overnight or next day, and other (two days or more). The industry will often refer to these as 'express service' and 'ground service' respectively. For local messengers, prices are collected for delivery time of one hour or less, and delivery time of three to

³ All figures, unless otherwise stated, are in Canadian dollars.

⁴ Regular mail delivery by Canada Post is not part of either of these two industries; it falls under a separate industry (NAICS 491).

four hours.

The index methodology is based on model pricing. In the case of couriers, a detailed set of price specifications covering geography (i.e. origin and destination of service), type of parcel and type of service are followed from month to month (see Table 1).

Table 1: Pricing Specifications

Specification	Details	Remarks
1. Geography	<ol style="list-style-type: none"> 1. Province/territory to province/territory 2. Region (East, Quebec, Ontario and West) to the United States and Mexico 	<ol style="list-style-type: none"> 1. Capital cities (city halls) 2. Vancouver, Toronto, Montreal, Halifax to New York City and Mexico City
2. Type of Parcel	<ol style="list-style-type: none"> 1. Business letter 2. 3 kg package 	
3. Type of Service	<ol style="list-style-type: none"> 1. Express - Next day/overnight 2. Ground - Two days or more 	<ol style="list-style-type: none"> 1. To business clients 2. Basic service, no options

In determining the geographical specifications, the postal codes for the city halls of the capital city of each province and territory were used as pick-up and delivery points for the domestic traffic, with the exception of Quebec, Alberta and British Columbia. For these provinces, the postal codes for the city halls of Montreal, Calgary and Vancouver respectively, were used. For the international delivery destinations, New York City was chosen to represent the United States, while Mexico City represents Mexico. The cities of origin for the international delivery comprise Halifax, Montreal, Toronto and Vancouver in order to have regional representation. For local messengers, anywhere from one to three of the largest firms were chosen to represent each province/territory.

In discussions with the industry, it was determined that changes in the price level are uniform across all dimensional weight categories.⁵ As well, when prices are changed, they are changed uniformly across all geographies. This has important implications for refining the current set of specifications and collection strategy to be more efficient.

Data sources

The collection source for couriers is primarily the Internet, where individual company rates or pricing schedules are available for downloading. In some cases, 'rate-finders', or online invoice calculators, are used to obtain price estimates. The pricing algorithm used

⁵ 'Dimensional weight', an industry term referring to a calculation based on length, height and width. The exact formula for dimensional weight will vary somewhat from company to company. If the calculated dimensional weight is greater than the actual package weight, the client is charged at the higher rate.

by the major courier companies consists of a base price and fuel surcharge. Base prices are usually set on an annual basis, while fuel surcharges will fluctuate sub-annually. In the case of local messengers, prices are collected by telephone.

Sampling

This is a sample survey with a longitudinal design. In the case of couriers, the top five companies in Canada are selected to represent the industry. They alone account for approximately 80% of the operating revenue generated by the courier industry. For the local messenger portion, a subjective sample of establishments is chosen to provide provincial/territorial representation, although the index is published at the national level only.

Limitations

One potential limitation of the methodology is the limited degree of international pricing currently employed. The present sampling and pricing method has *some* international pricing, however, on-going research will determine if it is adequate and truly representative of emerging markets and trends for this service. Additional important countries or regions may have to be added where research indicates price change could behave differently.

One other consideration is the existence of contract pricing or ‘account pricing’, that is the different treatment business clients receive upon signing a contract with a courier company. Depending on the terms of the contract, the price *level* can vary between clients, however at this point it is not clear that the price *change* will as well. Further research will continue in this area, but such data are not likely forthcoming from respondents, given their confidential nature. Account pricing also makes comparability potentially more difficult, since the effective prices that account holders pay will vary according to a number of conditions set out in the contract (e.g. expected number of parcels sent in a year).

D. Published data and limitations and concerns about the published data

Weights and Aggregation

The aggregation weights for the CMSPI are derived from the micro-data obtained through Statistics Canada's Survey of Couriers and Local Messengers Industry 2000. In the case of couriers, the geometric mean is calculated for the price relatives for the specified types of parcels for each company. Next, the shares of revenues based on the type of service (overnight/next day versus other) are used to aggregate up to the domestic and international destination levels, and then these series are combined to produce the price index for each company. At the company level, the re-calculated shares for each company are used to produce the final price index series for couriers. The re-calculated

company shares reflect the relative shares of total operating revenues for only the top five companies.

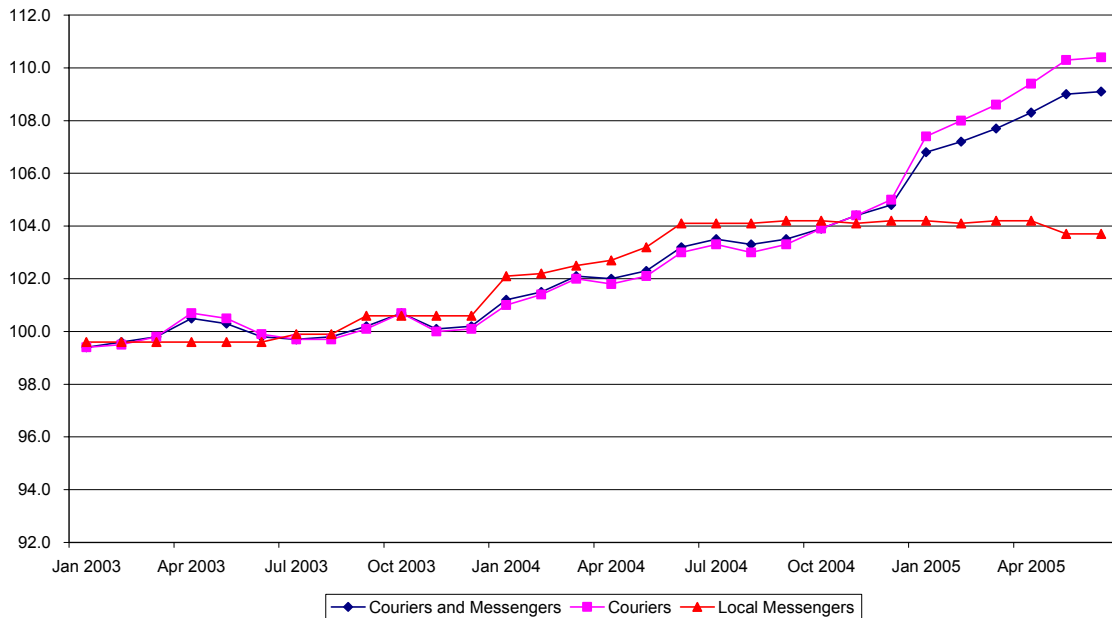
For local messengers, the geometric mean of price relatives for two types of service is calculated (delivery time of one hour or less, and delivery time of three to four hours) to produce a company-level index. The provincial or territorial weights are used to aggregate up to a national index.

The shares of total operating revenue from delivery services are used to combine the price index for couriers and the price index for local messengers to arrive at the overall index for NAICS 492 Couriers and Messengers.

Published Data

The results for the CMSPI are presented in Figure 1. The CMSPI rose 9.8% between January 2003 and June 2005. The courier portion increased 11.1% and the local messengers component was up 4.1%. Since January 2005, the marked increase in the CMSPI for couriers (5.1%) has been largely due to increased fuel charges passed on by the industry to its customers.

**Figure 1- CMSPI
2003=100**



Source: Statistics Canada, Cansim, Table 329-0053.

One concern with the data is the frequency of weight revisions. The current philosophy is to update the CMSPI weights every five years, however, industry developments and market conditions are likely to dictate more frequent revisions. The current weights are derived from the 2000 activity survey. With the release of preliminary results for 2003, further analysis will be carried out to decide whether they (i.e. the 2000 weights) are still valid or should be updated.

E. Analysis of goodness or quality of published data.

Referring to the criteria presented in Table 2, the CMSPI is judged to be a Category A – “Best” index in terms quality or goodness.

Table 2: Criteria Used For Evaluating Quality of the CMSPI

Criteria	Category A – “Best”	Category B – “Good”	Category C – “Poor”
Price collected	True transaction price	Good proxy for transaction price	No relation to transaction price
Quality change	Close to 100% quality change accounted for	Significant quality change accounted for	No significant quality change accounted for
Relevance of publishing	Frequency correlates directly with price Δ	Frequency correlates closely with price Δ	Frequency <u>does not</u> correlate with price Δ
Dependability and accuracy	Robust sample (excellent size & representation)	Semi-robust sample (fair size & representation)	Weak sample (poor size & representation)

Given the data sources and collections methods described above, the prices collected are considered to represent “true” transaction prices at the producer level. Quality change is addressed through the use of specification pricing where specifications are kept constant over time (e.g. items such as delivery time, reliability, amount of insurance). The terms of the service contract are monitored and adjusted for subjectively with input from the respondent, so that the treatment of quality change is not considered to be problematic.

Data is collected and the series are produced on a monthly basis. One exception is for local messenger who do not employ fuel charges in their pricing. These companies have indicated that they change their prices less frequently (i.e. every 6-12 months). For these respondents, a 6-month pricing schedule is followed. As a result, price change is tracked as it occurs, so that the relevance of publishing is very high.

The skewed distribution of industry activity allows for an effective use of cut-off sampling. The courier portion is well-represented (80% of the industry activity covered with five companies), while the local messenger portion has a strong geographic representation as well. Given the competitive nature of this industry, the sample is strong and represents the industry well.