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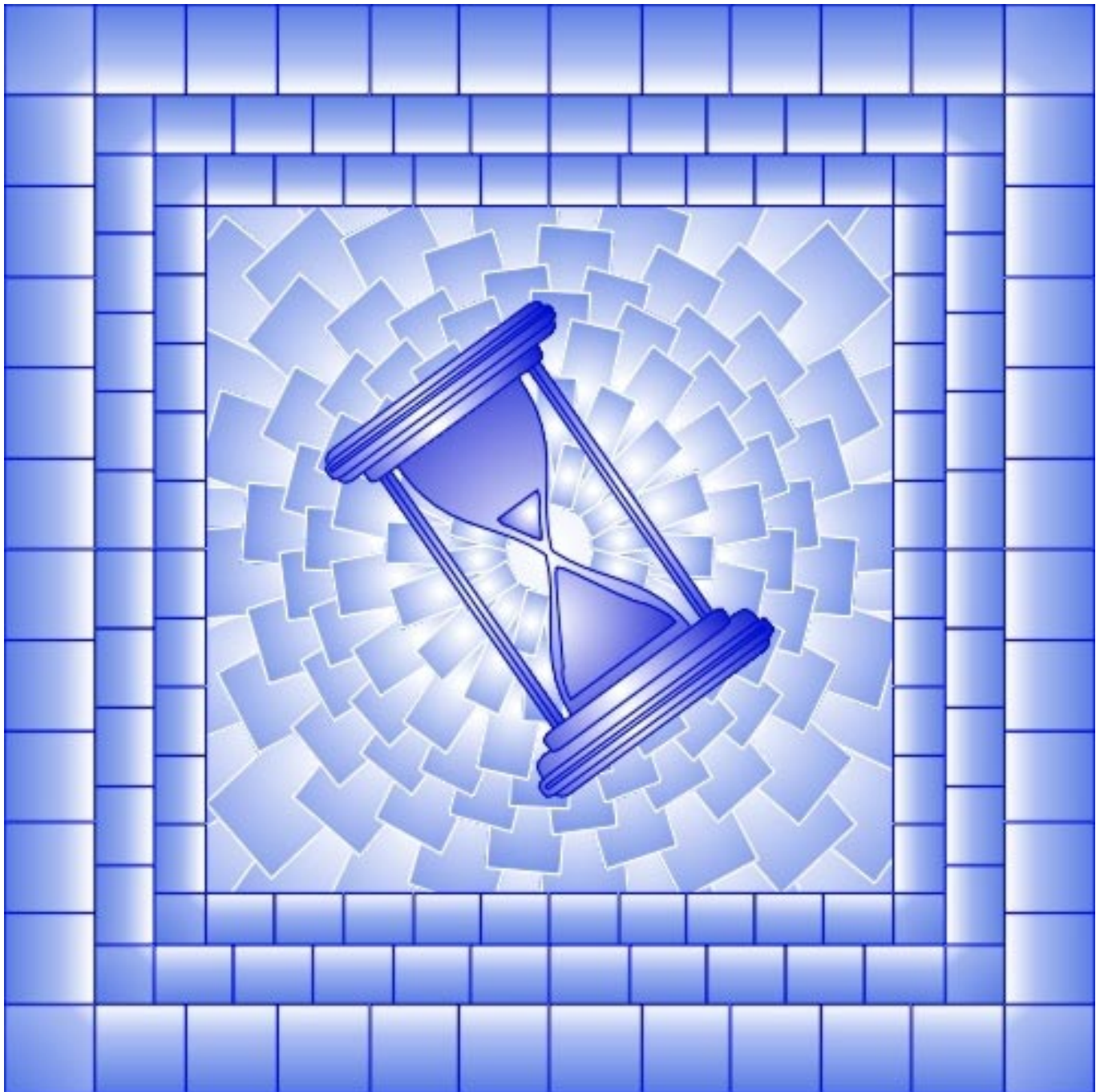
# *Analytical Series*

## *Prices Division*

*Comparative Study of Analytical Consumer Price Indexes (CPI)  
for Different Subgroups of the Reference Population*

*By Nathalie Taktek*

*No.13*



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***Comparative Study of Analytical Consumer Price Indexes (CPI)  
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*Any views in this paper are those of the author and do not necessarily represent the opinions of  
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## **Preface**

Prices Division first started publishing the Analytical Series in December 1996 as a means to convey conceptual and applied research undertaken by its staff, and at times, by other persons from within or outside Statistics Canada on the subject of price indexes.

All papers are reviewed by a panel of experts from within Statistics Canada or outside the agency. Views expressed in the papers are those of the authors and do not necessarily reflect those of Prices Division or Statistics Canada.

The purpose of the series is to disseminate knowledge and stimulate discussion. Questions and comments on any aspect of the papers are welcome and can be forwarded to Louis Marc Ducharme, Director (Internet email: [ducharl@statcan.ca](mailto:ducharl@statcan.ca); Telephone: 613-951-0688) or to Robin Lowe, Chief, Quality Assurance (Internet email: [lowerob@statcan.ca](mailto:lowerob@statcan.ca); Telephone: 613-951-9495), Prices Division, Statistics Canada, Ottawa, Ontario, K1A 0T6.

## **Abstract**

The reference population for the Consumer Price Index (CPI) has been represented, since the 1992 updating of the basket of goods and services, by families and unattached individuals living in private urban or rural households. The official CPI is a measure of the average percentage change over time in the cost of a fixed basket of goods and services purchased by Canadian consumers.

Because of the broadly defined target population of the CPI, the measure has been criticised for failing to reflect the inflationary experiences of certain socio-economic groups. This study examines this question for three sub-groups of the reference population of the CPI. It is an extension of earlier studies on the subject done at Statistics Canada.

In this document, analytical consumer price indexes sub-group indexes are compared to the analytical index for the whole population calculated at the national geographic level.

The findings tend to point to those of earlier Statistics Canada studies on sub-groups of the CPI reference population. Those studies have consistently concluded that a consumer price index established for a given sub-group does not differ substantially from the index for the whole reference population.

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## 1.0 Introduction

Statistics Canada regularly publishes a Consumer Price Index (CPI) for which the reference population has been represented, since the 1992 updating of the basket of goods and services, by families and unattached individuals living in private urban or rural households. The official CPI<sup>1</sup> is a measure of the *average* percentage change over time in the cost of a *fixed basket* of goods and services purchased by Canadian consumers.

However, some groups in the population question that the official CPI reflects their personal experience with the price changes that they have to consider in order to maintain their constant standard of living. This study is an extension of earlier studies conducted at Statistics Canada pertaining to special groups in the population covered by the Consumer Price Index.

In 1978, Statistics Canada published quarterly indexes for low-income families, covering the period June 1973 to June 1977. Two years later, Statistics Canada introduced a *monthly* index for low-income families and unattached individuals.<sup>2</sup> This index, which included unattached individuals in the same way that the official CPI with low-income cut-offs does, was published annually from September 1978 to December 1988. In 1986, a consumer price index for low-income senior citizens was added to the one for low-income families and unattached individuals.

In this document, analytical consumer price indexes for the subgroups consisting of low-income households and low-income senior citizen households are presented annually from 1993 to 1996, with regard to the 1992 basket and prices, using the year 1992 as the time base (1992=100). A third subgroup, consisting of senior citizens, is also included in the analysis. These special group indexes are compared to the analytical index for the reference population, which for the purposes of this study, is calculated at the national geographic level.

The findings of this study are comparable to those of earlier Statistics Canada studies on subgroups of the CPI reference population. Those studies have consistently shown that a consumer price index established for a given subgroup of the reference population does not differ substantially from the index for the reference population itself.

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<sup>1</sup> The expression "official CPI" does not mean that the other CPIs produced by Statistics Canada are not official; it merely designates the CPI that applies to all families and unattached individuals living in private urban or rural households.

<sup>2</sup> Statistics Canada (1980 to 1989), "A Consumer Price Index for Low-Income Families and Unattached Individuals", *Consumer Prices and Price Indexes*, Catalogue No. 62-010, supplement to January-March issue, Ottawa.

## 2.0 Methodology and data sources

To make them comparable<sup>3</sup>, the analytical consumer price indexes for senior citizens, low-income senior citizens and low-income households are calculated using the same methodology as for the reference population index. Each of the special group indexes is constructed using a set of expenditure weights representing a different basket, but all are drawn from the same reference period, in this case, 1992. The monthly indexes produced are weighted averages of the price indexes for the 182 basic classes in the 1992 classification of goods and services.<sup>4</sup> The annual indexes are calculated as simple arithmetic means of the 12 monthly indexes from January to December. The price series used for the subgroups are based on national data collected for the CPI. These price series take account of the regional distribution of the reference population for the official CPI, but not necessarily that of the special groups.

The weights are calculated using the expenditures drawn from the Family Expenditure Survey (FAMEX)<sup>5</sup> and the Family Food Expenditure Survey (FOODEX)<sup>6</sup>. These expenditures are selected for the components of the official CPI. The reference population covers Canadian private households, either urban or rural, consisting of families or unattached individuals living alone. The special groups, such as low-income families, low-income senior citizens and senior citizens, are subgroups of the reference population. These groups therefore have the same coverage as the reference population. At the same time, they adhere to the definition specific to their respective populations.

### 2.1 Definition of reference population

For the 1982 and 1986 baskets, the reference population of the official CPI – that is, the population represented by the Consumer Price Index – covers families and individuals living in cities with a population of 30,000 or more, as well as Whitehorse and Yellowknife. With the introduction of the 1992 basket, the reference population was expanded to include families and unattached individuals living in private households, either urban or rural.

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<sup>3</sup> *The methods of calculating the CPI are described in **The consumer price index reference paper, Update based on 1992 expenditures**, Catalogue No. 62-553, Statistics Canada, July 1995.*

<sup>4</sup> *The CPI is structured into eight major components, which are in turn divided into 182 basic classes. The basic class is the most disaggregated level for which an index is calculated, while the All-items index is the highest level.*

<sup>5</sup> *Statistics Canada (1994), **Family Expenditure in Canada, 1992**, Catalogue No. 62-555, Ottawa, p. 201.*

<sup>6</sup> *Statistics Canada (1994), **Family Food Expenditure in Canada, 1992**, Catalogue No. 62-554, Ottawa, p. 113.*



## 2.2 Definition of low-income cut-offs<sup>7</sup>

Low-income cut-offs are used to delineate family units into “low-income” and “other” income groups. A family unit with income below the cut-off for its family unit size and the size of its area of residence is considered a “low-income” family (Table 1). Any family with income equal to or above the cut-off is considered to be in the “other” income category.

**Table 1: Low-income cut-offs for family units (1992 base)**

Size of area of residence					
	Urban areas				Rural areas
Size of family unit	500,000 inhabitants or more	100,000 to 499,999	30,000 to 99,999	Less than 30,000 inhabitants	
	Dollars (\$)				
1 person	16,186	13,883	13,787	12,829	11,186
2 persons	20,233	17,354	17,234	16,036	13,982
3 persons	25,163	21,583	21,433	19,943	17,390
4 persons	30,460	26,126	25,945	24,142	21,050
5 persons	34,049	29,205	29,002	26,986	23,531
6 persons	37,638	32,284	32,059	29,830	26,012
7 persons or more	41,227	35,363	35,116	32,674	28,493

**Source:** Statistics Canada (1997), *Low-income Cut-offs (LICOs)*, Catalogue No. 13-551-XPB, Ottawa, p. 23.

The low-income cut-offs established by Statistics Canada apply to economic families and unattached individuals. An economic family is defined as a group of individuals related by blood, marriage or adoption who shared a common dwelling unit at the time of the survey. On the other hand, an unattached individual is a person living alone or in a household where he/she is not related to other household members.

Statistics Canada does not produce a specific low-income cut-off for each of the subgroups covered by this study. Therefore, each subgroup uses the specifications of the low-income cut-offs in conjunction with its own characteristics.

Low-income cut-offs are also determined using data from the Family Expenditure Survey. From these data, a calculation is made of the overall proportion of pre-tax income devoted to the average expenditures of Canadian families on food, shelter, and clothing. Base year low-income cut-offs are set where families spend 20 percentage points more than the Canadian average on food, shelter, and clothing.

<sup>7</sup> Statistics Canada (1997), *Low-income Cut-offs (LICOs)*, Catalogue No. 13-551-XPB, Ottawa, p. 23.

## **2.3 Definition of subgroup populations**

### **2.3.1 Low-income households**

Low-income households are for the purposes of this study those who live in private households, either urban or rural, and include households<sup>8</sup> composed of one or more persons whose combined income falls below the low-income cut-off established by Statistics Canada. Low-income cut-offs vary by household size and size of area of residence.

### **2.3.2 Low-income senior citizens**

For the purposes of this study, low-income senior citizens are those who live in private households, either urban or rural, and include: 1) married couples<sup>9</sup> with no others in their household whose reference person<sup>10</sup> is at least 65 years of age and whose combined income is less than the low-income cut-off established by Statistics Canada for a two-person family; and 2) households of one unattached individual<sup>11</sup> at least 65 years of age whose income is less than the low-income cut-off for one person.

### **2.3.3 Senior citizens**

In this study, senior citizens are those who live in private households, either urban or rural, and include: 1) married couples with no others in their household, whose reference person is at least 65 years of age; and 2) unattached individuals at least 65 years of age.

## **2.4 Sample sizes**

The sample for the 1992 Family Expenditure Survey consists of 10,461 households.<sup>12</sup> The subsamples of low-income households, low-income senior citizens, and senior citizens represent 2,194 (21%), 605 (6%) and 1,958 (19%) of households respectively. The percentages in brackets show the proportion of the survey sample that the subsamples represent.

These subsamples are too small in size to cover the same geographic strata as those of the official CPI. Therefore, the calculation of weights for each of the analytical indexes, including the analytical index for the reference population, is done at the national level only. While the sample of low-income senior citizens represents only 605 spending units, its size is comparable with the size of the samples created for the provinces, and for which an official CPI is regularly published. In fact, for 1992, the smallest provincial sample consists of only 225 households.

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<sup>8</sup> A household is a person or group of persons occupying a dwelling. The number of households is therefore equal to the number of occupied dwellings.

<sup>9</sup> Married couples are defined as couples who reported being married as of December 31 of the survey year.

<sup>10</sup> The reference person is the person designated as being the main financial supporter of the household.

<sup>11</sup> An unattached individual is a financially independent person who lives alone.

<sup>12</sup> For a description of the survey methodology, see Statistics Canada (1994), *Family Expenditure in Canada, 1992*, Catalogue No. 62-555, Ottawa, p. 201.

It should be kept in mind that when the number of households used to determine the weights for a special group is relatively small; the weights used to construct the CPI for this special group have greater sampling error than those based on a larger sample. However, in the case of the consumer price index, errors resulting from weights are a less important source of bias than those resulting from the price collection process.<sup>13</sup>

### **3.0 Are the special groups different from the reference population?**

#### **3.1 Comparative analysis of analytical CPIs**

The movements of the indexes produced for the special groups (low-income households, low-income senior citizens, and senior citizens) may be compared to those of the index for the reference population since they are constructed as subindexes of the latter. Potential dissimilarities between the overall indexes for the special groups and the overall index for the reference population should result solely from the different sets of weights established at the level of the basic classes, since the aggregation process for each index remains the same and the relative prices applied to the weights are those collected for the reference population. When the indexes are compared, the gaps between them during the study period can be identified. Table 2 shows the four indexes that were constructed on a 1992 time base (1992=100). These are unlinked indexes calculated using the 1992 basket. For 1992, 1993, and 1994, these indexes differ from those published by Statistics Canada, using the weights for the 1986 basket. The weights of the 1992 basket are only used in the published CPIs from January 1995 onwards.

Table 2 shows that from 1993 to April 1997, the four overall indexes stayed within two percentage points of each other. During this period, the indexes for low-income households, low-income senior citizens, and senior citizens rose 7.4%, 7.9% and 8.7% respectively. As to the index for the reference population, it rose 7.9%. Throughout 1993, the four indexes moved up at a very similar rate, so that their paths, as shown in Chart 1, tend to merge. Starting in 1994, the four indexes rise more slowly, and while they all follow the same trend, their paths move apart. This slackening is to a great extent due to the lowering of cigarette taxes, which largely masks the general increase in prices. As to the spread that develops between the indexes, this is due to the differences in weights for each of the groups with respect to the major component “Alcoholic beverages and tobacco products”. Since low-income households, followed by the reference population, have the largest weights for this component, their overall index appears to slow down more than do those of the other two groups.

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<sup>13</sup> Turvey, Ralph (1989), “Consumer price indices”, *International Labour Office, Geneva*, p. 114.

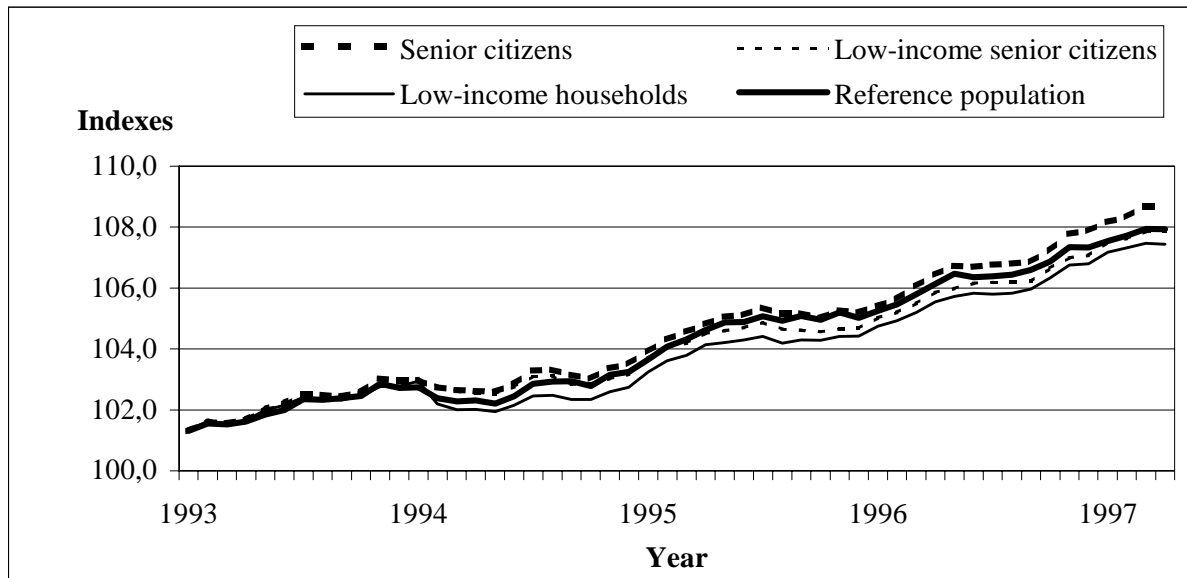
The rise in the low-income index very closely follows that for the reference population and indeed is most of the time lower, especially in the period since 1994. The low-income senior citizens index follows the movement of the index for the reference population even more closely than does the low-income index. By contrast, the senior citizens index has, since 1994, posted the highest monthly increase of the four indexes. This gap between the movement of the senior citizens index and the other three indexes is mainly due to the drop in mortgage interest rates which began during this period. In fact, many senior citizens have paid off their mortgage, having benefited from the low interest rates of the 1960s and 1970s. As a result, senior citizens currently spend comparatively less in the form of mortgage interest payments than the reference population, with relative weights of 0.93% and 5.7% respectively. The reference population spends approximately six times more on mortgage interest costs. Therefore, owing to the combined effect of the recent drop in interest rates and a relatively low interest expenditure, the senior citizens index shows greater upward movement than that of the reference population. Actually, in the latter's case, the overall index is pulled down by the combination of a weight six times as large for the interest expenditure and mortgage interest rates that register smaller increases than the rest of the components in the basket.

Other major differences between the indexes appeared at lower levels of aggregation, but they tended to offset one another, which moderated the spread between the All-item indexes. Over the entire period, the greatest price increases at the major component level were in "Transportation" and "Recreation, education and reading", while the greatest declines were for "Alcoholic beverages and tobacco products" (Table A appended). It is the weights at the basic class level, or at an intermediate level such as those of the eight major components, that make it possible to analyse and explain the differences between the price movements of the four analytical indexes, since the latter are based on the same price series.

**Table 2: All-item analytical indexes for the reference population, low-income households, low-income senior citizens, and senior citizens for Canada, 1993-1997 unlinked indexes, 1992 basket and prices, (1992=100)**

All-item analytical indexes				
	Reference population	Low-income households	Low-income senior citizens	Senior citizens
Annual average				
<b>1992</b>	100.0	100.0	100.0	100.0
<b>1993</b>	102.1	102.1	102.2	102.2
<b>1994</b>	102.7	102.4	102.9	103.0
<b>1995</b>	104.7	104.1	104.5	104.9
<b>1996</b>	106.4	105.8	106.1	106.7
<b>1997</b>				
January	107.5	107.2	107.5	108.2
February	107.7	107.3	107.6	108.3
March	107.9	107.5	107.9	108.7
April	107.9	107.4	107.9	108.7

**Chart 1: All-item indexes for the reference population, low-income households, low-income senior citizens, and senior citizens for Canada, 1993-1997 unlinked indexes, 1992 basket and prices, (1992=100)**



### 3.2 Weights for analytical indexes

The weights for each of the analytical indexes presented in this study are expressed as a percentage of their respective total expenditures on goods and services in the basket covered by the CPI calculation. Each set of weights reflects the composition of the expenditures of the group or subgroup to which it applies.

For the reference population as well as for each of the subgroups, the weight of the basic expenditure in any component represents the real expenditure on that component in the base period. The relative importance of any item is its basic expenditure weight updated by relative price changes and is presented as a percentage of total expenditures adjusted for the population concerned (Table B appended). It is this weight that determines the degree of influence exerted on the composite index by the price variable of the corresponding basic class.

The four series of weights for the eight major components are presented in Table 3. The weights for the 182 basic classes are detailed in Table C of the appendix. For both tables, the weights are expressed in terms of 1992 quantities and prices.

The average expenditures by major components, expressed in absolute figures and also illustrated in Table 3, clearly show that even though some weights (a major component's relative share of total expenditures) are greater for the special groups, this does not signify excessive consumption of the item in question. In the case of low-income households, the relative share of total expenditures for the major component "Alcoholic beverages and tobacco products" is 6.48% as compared to 5.47% for the reference population. In other words, it is 18.46% higher.

In absolute figures, low-income households' average expenditure on "Alcoholic beverages and tobacco products" is \$1,079.96 as compared to \$1,737.71 for the reference population, that is, 37.85% lower.

Once again in absolute figures, the average expenditures of a low-income household represent only 52.5% of the average expenditures of households in the reference population. The average expenditures of low-income senior citizens and senior citizens represent 42% and 63% respectively of the average expenditures of the reference population.

At the basic class level, the sets of weights for the three special groups exhibit fairly sizeable variations in relation to the weights for the reference population. The greatest impact of the change of weights in relation to the reference population is with respect to the low-income senior citizens subgroup, with a coefficient of variation of 75% for quantities. The coefficient of variation for the change of weights for the low-income households subgroup amounts to 47%, and for the senior citizens subgroup, 45%. A comparison of the change of weights between senior citizens and low-income senior citizens, in turn, yields a coefficient of variation for quantities that amounts to 49%. Senior citizens are the subgroup for which the differences between the weighting schemes are the smallest in relation to the reference population.

An examination of Table 3 shows that the special groups' weights at the level of the eight major components are higher than those of the reference population for three of the eight components in each case. The weights for the food and shelter components exhibit substantial differences, which is consistent with the definition of the low-income cut-offs applied to low-income households and low-income senior citizens. Food expenditures account for a greater share of total expenditures for low-income households (26.1%) and low-income senior citizens (26.2%) than for the reference population (18%). For senior citizens, the share is once again higher, although to a lesser extent, with 18.9% compared to 18% for the reference population. On the other hand, the weights for the shelter component are much higher for low-income households (31.7%), low-income senior citizens (38.9%) and senior citizens (31.6%) than for the reference population (27.5%). However, the relative share for the sub-aggregates is not the same for each of the groups, especially in the case of rented accommodation. For this item, low-income households and low-income senior citizens register weights of 18% and 18.2% respectively, compared to 7.2% for the reference population. As for senior citizens, they register a weight of 9.5% for the rented accommodation component. This translates into weightings for the sub-aggregate "rented accommodation" that are 150% higher for low-income households, 153% higher for low-income senior citizens and 32% higher for senior citizens, than for the reference population.

While the differences in weights between each special group and the reference population are significant, an examination of the movements of the respective indexes provided in Table 2 reveals that nevertheless, the indexes do not differ to any great extent. This is partly due to the numerous relationships between relative prices and weights that exist simultaneously and therefore tend to offset each other.

**Table 3: Comparative analysis of total average expenditures and distribution of expenditures for the eight major components of the CPI, reference population, low-income households, low-income senior citizens, and senior citizens, 1992 basket and prices**

<b>Major component</b>	<b>Reference population</b>	<b>Low-income households</b>	<b>Low-income senior citizens</b>	<b>Senior citizens</b>
<b>Average expenditure (in dollars)</b>	31,752	16,676	13,352	19,921
1 Food	5,735	4,354	3,498	3,762
2 Shelter	8,735	5,291	5,194	6,293
3 Household operations and furnishings	3,290	1,563	1,182	1,969
4 Clothing and footwear	2,168	796	525	1,025
5 Transportation	5,471	1,800	1,103	3,259
6 Health and personal care	1,384	720	680	993
7 Recreation, education and reading	3,232	1,071	573	1,610
8 Alcoholic beverages and tobacco products	1,738	1,080	597	1,009
<b>Relative share (in percentage)</b>				
<b>All items</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1 Food	18.1	26.1	26.2	18.9
2 Shelter	27.5	31.7	38.9	31.6
Rented accommodation	7.2	18.0	18.2	9.5
Owned accommodation	15.9	9.5	14.1	15.7
Water, fuel and electricity	4.5	4.9	6.6	6.4
3 Household operations and furnishings	10.4	9.4	8.9	9.9
4 Clothing and footwear	6.8	4.8	3.9	5.1
5 Transportation	17.2	10.8	8.3	16.4
Private transportation	15.9	9.4	6.7	14.9
Public transportation	1.3	1.6	1.6	1.5
6 Health and personal care	4.4	4.3	5.1	5.0
7 Recreation, education and reading	10.2	6.4	4.3	8.1
Recreation	8.1	4.8	3.4	6.8
Education and reading	2.1	1.8	0.9	1.3
8 Alcoholic beverages and tobacco products	5.5	6.5	4.5	5.1

## **4.0 Conclusion**

Earlier studies conducted by Statistics Canada on subgroups of the CPI reference population have consistently shown that a consumer price index established for a given subgroup does not greatly differ from the index for the reference population.

The findings of this study tend to point in the same direction. These results may seem surprising, especially when the differences in weights between the special groups and the reference population are significant. This phenomenon is in part explained by the simultaneous relationships between relative prices and weights. Also, the price series of the components used to produce the indexes for the special groups are the same as those for the reference population. These price series take into account the regional distribution of the reference population and not necessarily that of the subgroups. In fact, the prices observed are based on the goods and services usually purchased by the reference population. These prices may not represent those experienced by the special groups. Since the latter do not have the same ease of access to consumer items, they quite probably purchase different products, in different quantities, at different sales outlets. However, prices tend to follow the same trend, which should result in relative prices that do not greatly vary from one group to another, even if a price collection were to prove that there is indeed a difference between the price levels affecting the sales outlets patronised by the different consumer groups.



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## **APPENDICES**

**Table A**

**Indexes for CPI all-items and eight major components: reference population, low-income households, low-income senior citizens and senior citizens, Canada, 1993-1997 unlinked indexes, 1992 basket and prices (1992=100)**

	All-items				Food				Shelter			
	Reference population	Low-income households	Low-income senior citizens	Senior citizens	Reference population	Low-income households	Low-income senior citizens	Senior citizens	Reference population	Low-income households	Low-income senior citizens	Senior citizens
Annual average												
<b>1992</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>1993</b>	102.1	102.1	102.2	102.2	101.9	101.9	102.0	102.0	102.6	102.6	102.8	102.7
<b>1994</b>	102.7	102.4	102.9	103.0	102.4	102.5	102.5	102.5	103.4	104.0	104.2	104.1
<b>1995</b>	104.7	104.1	104.5	104.9	104.7	104.9	104.9	104.8	104.7	105.0	105.0	104.6
<b>1996</b>	106.4	105.8	106.1	106.7	106.2	106.2	106.2	106.1	104.9	105.9	106.0	105.3
<b>1997</b>												
January	107.5	107.2	107.5	108.2	107.5	107.5	107.6	107.5	105.3	106.8	107.3	106.7
February	107.7	107.3	107.6	108.3	107.7	107.7	107.7	107.7	105.3	106.9	107.4	106.8
March	107.9	107.5	107.9	108.7	107.6	107.7	107.6	107.6	105.3	106.9	107.5	106.9
April	107.9	107.4	107.9	108.7	107.4	107.4	107.4	107.4	105.2	106.9	107.5	106.9

**Table A**

**Indexes for CPI all-items and eight major components: reference population, low-income households, low-income senior citizens and senior citizens, Canada, 1993-1997 unlinked indexes, 1992 basket and prices (1992=100)  
(Continued)**

	Household operations and furnishings				Clothing and footwear				Transportation			
	Reference population	Low-income households	Low-income senior citizens	Senior citizens	Reference population	Low-income households	Low-income senior citizens	Senior citizens	Reference population	Low-income households	Low-income senior citizens	Senior citizens
Annual average												
<b>1992</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>1993</b>	100.7	100.6	100.7	100.6	100.9	101.0	100.6	100.6	102.9	103.0	102.8	103.0
<b>1994</b>	100.9	100.6	100.6	100.6	101.4	101.7	101.4	101.2	107.1	106.8	106.3	107.4
<b>1995</b>	102.6	102.3	102.3	102.3	100.5	100.7	101.0	100.6	112.1	111.5	110.8	112.4
<b>1996</b>	104.8	105.0	105.3	104.9	100.1	100.6	101.0	100.3	116.5	116.0	115.2	116.8
<b>1997</b>												
January	106.0	106.6	107.2	106.2	99.2	100.1	100.7	99.6	120.2	119.9	119.2	120.8
February	105.9	106.3	107.0	106.1	100.3	100.9	101.6	100.7	120.0	119.7	118.8	120.4
March	106.3	106.7	107.3	106.5	101.5	102.0	103.3	102.3	120.1	119.9	119.2	120.7
April	106.3	106.6	107.1	106.4	102.6	103.2	104.0	103.1	119.7	119.5	118.8	120.3

**Table A**

**Indexes for CPI all-items and eight major components: reference population, low-income households, low-income senior citizens and senior citizens, Canada, 1993-1997 unlinked indexes, 1992 basket and prices (1992=100)  
(Concluded)**

	Health and personal care				Recreation, education and reading				Alcoholic beverages and tobacco products			
	Reference population	Low-income households	Low-income senior citizens	Senior citizens	Reference population	Low-income households	Low-income senior citizens	Senior citizens	Reference population	Low-income households	Low-income senior citizens	Senior citizens
Annual average												
<b>1992</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>1993</b>	102.6	102.7	102.5	102.6	102.0	102.5	102.4	101.8	101.5	101.4	101.5	101.5
<b>1994</b>	103.3	103.1	103.5	103.6	105.1	105.9	106.2	105.1	85.9	85.5	88.4	86.7
<b>1995</b>	103.1	102.7	103.5	103.7	108.2	109.1	111.0	109.4	85.9	85.6	88.4	86.5
<b>1996</b>	103.6	103.2	104.2	104.4	110.7	111.9	113.9	112.2	87.6	87.3	90.1	88.1
<b>1997</b>												
January	104.4	103.9	104.8	105.0	110.6	112.8	112.9	110.9	89.4	89.1	91.9	89.9
February	104.8	104.3	105.0	105.3	111.4	113.3	113.9	112.3	89.7	89.4	92.2	90.2
March	104.8	104.4	105.1	105.4	112.1	114.0	115.6	114.1	89.8	89.5	92.3	90.3
April	105.7	105.0	105.9	106.3	112.3	114.0	116.0	114.4	89.8	89.5	92.3	90.3

**Table B**

**Expenditure adjustments by changes in relative prices**

<b>Major component</b>	<b>Reference population, 1992 average</b>	<b>Change in relative prices for 1996</b>	<b>New relative share</b>	<b>New adjusted relative shares, (1996)</b>
<b>Relative share (in percentage)</b>				
<b>All items</b>	<b>100.0</b>		<b>106.4</b>	<b>100.0</b>
1 Food	18.06	1.06	19.17	18.03
2 Shelter	27.51	1.05	28.86	27.13
3 Household operations and furnishings	10.36	1.05	10.86	10.21
4 Clothing and footwear	6.83	1.00	6.83	6.42
5 Transportation	17.23	1.16	20.07	18.87
6 Health and personal care	4.36	1.04	4.52	4.25
7 Recreation, education and reading	10.18	1.11	11.27	10.60
8 Alcoholic beverages and tobacco products	5.47	0.88	4.79	4.50

**Table C**

**Distribution of expenditures for the consumer price index for Canada: CPIs for the reference population (official), low-income households, low-income senior citizens, and senior citizens, in 1992 prices**

	Official CPI	Low-income households	Low-income senior citizens	Senior citizens	
1	Fresh or frozen beef	1.03	1.60	1.68	1.27
2	Fresh or frozen pork	0.33	0.49	0.58	0.38
3	Other fresh or frozen meat (excluding poultry)	0.12	0.17	0.27	0.17
4	Fresh or frozen chicken	0.48	0.72	0.79	0.51
5	Other fresh or frozen poultry meat	0.11	0.14	0.20	0.16
6	Ham and bacon	0.31	0.44	0.53	0.41
7	Other processed meat	0.62	0.93	0.89	0.65
8	Fresh or frozen fish (including portions and fish sticks)	0.20	0.33	0.41	0.31
9	Canned and other preserved fish	0.10	0.14	0.20	0.15
10	Other seafood	0.12	0.16	0.11	0.10
11	Fresh milk	0.73	1.27	1.22	0.85
12	Butter	0.13	0.19	0.26	0.19
13	Cheese	0.61	0.84	0.86	0.62
14	Ice cream and related products	0.15	0.22	0.25	0.18
15	Other dairy products	0.24	0.36	0.50	0.35
16	Eggs	0.16	0.30	0.31	0.21
17	Bread, rolls and buns	0.60	0.96	1.06	0.73
18	Biscuits	0.30	0.44	0.57	0.40
19	Other bakery products	0.34	0.51	0.69	0.47
20	Rice (including mixes)	0.07	0.12	0.11	0.08
21	Breakfast cereal and other cereal products	0.35	0.51	0.51	0.37
22	Pasta products	0.14	0.21	0.13	0.09
23	Flour and flour based mixes	0.09	0.16	0.22	0.13
24	Apples	0.17	0.27	0.25	0.17
25	Oranges	0.13	0.21	0.27	0.17
26	Bananas	0.13	0.22	0.30	0.20
27	Other fresh fruit	0.37	0.55	0.82	0.57
28	Fruit juices	0.35	0.52	0.52	0.37
29	Other preserved fruit and fruit preparations	0.18	0.28	0.44	0.31
30	Nuts	0.07	0.10	0.14	0.10
31	Potatoes	0.12	0.22	0.27	0.18
32	Tomatoes	0.12	0.19	0.22	0.18
33	Lettuce	0.09	0.13	0.15	0.11
34	Other fresh vegetables	0.54	0.83	0.96	0.68
35	Frozen and dried vegetables	0.11	0.17	0.14	0.09
36	Canned vegetables and other vegetable preparations	0.22	0.34	0.36	0.25
37	Sugar and syrup	0.09	0.16	0.18	0.14
38	Confectionery	0.28	0.37	0.39	0.30
39	Margarine	0.11	0.18	0.24	0.17
40	Other edible fats and oils	0.07	0.11	0.15	0.09
41	Coffee	0.17	0.28	0.34	0.23
42	Tea	0.06	0.11	0.16	0.11
43	Condiments, spices and vinegars	0.37	0.51	0.66	0.37
44	Soup	0.16	0.25	0.34	0.22
45	Infant and junior foods	0.08	0.16	0.00	0.01

**Table C**

**Distribution of expenditures for the consumer price index for Canada: CPIs for the reference population (official), low-income households, low-income senior citizens, and senior citizens, in 1992 prices**

	Official CPI	Low-income households	Low-income senior citizens	Senior citizens
46 Pre-cooked frozen food preparations	0.17	0.24	0.33	0.20
47 All other food preparations	0.54	0.81	0.70	0.48
48 Non-alcoholic beverages	0.59	0.81	0.68	0.51
49 Food purchased from table-service restaurants	3.19	3.15	3.27	2.58
50 Food purchased from fast food and take-out restaurants	1.43	1.51	0.78	0.71
51 Food purchased from cafeterias and other restaurants	0.85	0.81	0.79	0.59
52 Rent	6.98	17.58	17.60	9.12
53 Tenants' insurance premiums	0.11	0.19	0.32	0.18
54 Tenants' maintenance, repairs and other expenses	0.11	0.18	0.27	0.18
55 Mortgage interest cost	5.70	2.13	0.28	0.93
56 Replacement cost	3.53	2.74	4.93	5.32
57 Property taxes (including special charges)	3.08	2.51	5.32	4.82
58 Homeowners' insurance premiums	0.84	0.59	1.11	1.14
59 Homeowners' maintenance and repairs	1.47	0.89	1.81	2.28
60 Other owned accommodation expenses	1.23	0.63	0.66	1.20
61 Electricity	2.67	3.07	3.82	3.66
62 Water	0.42	0.39	0.56	0.53
63 Piped gas	0.79	0.80	1.00	1.09
64 Fuel oil and other fuel	0.57	0.63	1.21	1.13
65 Telephone services	1.94	2.47	2.61	2.25
66 Postal services and other communications services	0.16	0.17	0.23	0.23
67 Child care	0.81	0.44	0.00	0.00
68 Domestic services	0.25	0.09	0.31	0.52
69 Detergent and soap	0.38	0.49	0.41	0.38
70 Other household chemical products	0.40	0.49	0.43	0.40
71 Paper supplies	0.63	0.74	0.80	0.75
72 Plastic and foil supplies	0.16	0.18	0.15	0.16
73 Pet food and supplies	0.48	0.45	0.48	0.37
74 Seeds, plants and cut flowers	0.28	0.14	0.24	0.27
75 Other horticultural goods	0.08	0.04	0.06	0.11
76 Other household supplies	0.21	0.20	0.16	0.18
77 Other household services	0.30	0.17	0.28	0.39
78 Upholstered furniture	0.48	0.41	0.36	0.39
79 Wooden furniture	0.58	0.52	0.19	0.43
80 Other furniture	0.46	0.30	0.24	0.35
81 Window coverings	0.21	0.13	0.16	0.24
82 Bedding and other household textiles	0.32	0.25	0.17	0.26
83 Area rugs and mats	0.07	0.07	0.08	0.08
84 Cooking appliances	0.18	0.17	0.11	0.17
85 Refrigeration and air conditioning appliances	0.24	0.25	0.31	0.31
86 Laundry and dishwashing appliances	0.19	0.20	0.14	0.16
87 Other household appliances	0.22	0.23	0.23	0.27
88 Kitchen utensils	0.10	0.11	0.08	0.07
89 Tableware and flatware	0.09	0.07	0.03	0.05
90 House and yard tools	0.46	0.27	0.14	0.38



**Table C**

**Distribution of expenditures for the consumer price index for Canada: CPIs for the reference population (official), low-income households, low-income senior citizens, and senior citizens, in 1992 prices (continued)**

	Official CPI	Low-income households	Low-income senior citizens	Senior citizens
91 Other household equipment	0.36	0.25	0.15	0.28
92 Services related to household furnishings	0.31	0.26	0.32	0.43
93 Women's coats and jackets	0.37	0.29	0.44	0.47
94 Women's dresses	0.30	0.21	0.36	0.37
95 Women's suits, skirts and pants	0.62	0.37	0.34	0.47
96 Women's blouses, sweaters and other tops	0.51	0.33	0.31	0.43
97 Women's active sportswear	0.14	0.06	0.04	0.08
98 Women's underwear, sleepwear and hosiery	0.47	0.36	0.42	0.44
99 Men's coats and jackets	0.24	0.16	0.10	0.20
100 Men's suits and sport jackets	0.30	0.13	0.15	0.25
101 Men's pants	0.36	0.22	0.10	0.22
102 Men's sweaters and shirts	0.41	0.21	0.11	0.23
103 Men's active sportswear	0.10	0.04	0.01	0.04
104 Men's underwear, sleepwear and hosiery	0.16	0.11	0.08	0.13
105 Children's outerwear	0.08	0.10	0.00	0.00
106 Children's pants and dresses	0.20	0.24	0.00	0.00
107 Children's sweaters, shirts and blouses	0.09	0.09	0.00	0.00
108 Children's active sportswear	0.05	0.04	0.00	0.00
109 Children's underwear, sleepwear and hosiery	0.09	0.12	0.00	0.00
110 Women's footwear (excluding athletic)	0.35	0.30	0.45	0.41
111 Men's footwear (excluding athletic)	0.25	0.17	0.12	0.19
112 Children's footwear (excluding athletic)	0.09	0.10	0.00	0.00
113 Athletic footwear	0.24	0.18	0.04	0.09
114 Leather accessories	0.16	0.10	0.09	0.12
115 Watches	0.08	0.04	0.03	0.07
116 Jewellery	0.32	0.15	0.06	0.23
117 Other accessories	0.21	0.12	0.08	0.09
118 Clothing material and notions	0.15	0.10	0.13	0.16
119 Laundry service	0.15	0.35	0.25	0.14
120 Dry cleaning services	0.24	0.13	0.16	0.20
121 Other clothing services	0.10	0.05	0.06	0.10
122 Purchase of automobiles	4.52	2.36	1.64	5.03
123 Purchase of trucks and vans	1.98	0.91	0.17	1.42
124 Rental and leasing of automotive vehicles	0.42	0.10	0.09	0.19
125 Gasoline	3.78	2.33	1.77	3.34
126 Automotive vehicle parts and supplies	0.78	0.53	0.40	0.61
127 Automotive vehicle maintenance and repair services	1.32	0.86	0.75	1.24
128 Automotive vehicle insurance premiums	2.51	1.87	1.53	2.52
129 Automotive vehicle registration fees	0.28	0.25	0.20	0.29
130 Drivers' licences	0.09	0.09	0.07	0.08
131 Parking fees	0.15	0.06	0.01	0.08
132 All other automotive vehicle operating expenses	0.09	0.07	0.03	0.07
133 City bus and subway transportation	0.39	0.76	0.55	0.29
134 Taxi and other local and commuter transportation	0.14	0.27	0.49	0.27
135 Air transportation	0.65	0.41	0.44	0.78

**Table C**

**Distribution of expenditures for the consumer price index for Canada: CPIs for the reference population (official), low-income households, low-income senior citizens, and senior citizens, in 1992 prices (continued)**

	Official CPI	Low-income households	Low-income senior citizens	Senior citizens
136 Rail, bus and other inter-city transportation	0.10	0.13	0.12	0.15
137 Prescribed medicines	0.39	0.59	0.76	0.61
138 Non-prescribed medicines	0.22	0.23	0.30	0.28
139 Other health care goods	0.08	0.09	0.18	0.16
140 Eye care	0.33	0.32	0.51	0.43
141 Dental care	0.57	0.45	0.60	0.74
142 Other health care services	0.18	0.12	0.19	0.17
143 Personal soap	0.11	0.13	0.11	0.12
144 Toilet preparations and cosmetics	1.03	0.91	0.61	0.72
145 Oral-hygiene products	0.15	0.18	0.19	0.16
146 Other personal care supplies and equipment	0.37	0.50	0.15	0.16
147 Personal care services	0.94	0.88	1.48	1.44
148 Sporting and athletic equipment	0.43	0.17	0.02	0.09
149 Toys, games and hobby supplies	0.42	0.38	0.17	0.22
150 Computer equipment and supplies	0.45	0.24	0.00	0.10
151 Photographic equipment	0.06	0.03	0.01	0.02
152 Photographic services and supplies	0.33	0.24	0.12	0.21
153 Other recreational equipment and services	0.19	0.09	0.01	0.06
154 Purchase of recreational vehicles	0.76	0.18	0.12	0.77
155 Fuel, parts and supplies for recreational vehicles	0.17	0.05	0.01	0.13
156 Insurance, licences and other services for recreational vehicles	0.18	0.05	0.01	0.15
157 Audio equipment	0.27	0.20	0.05	0.12
158 Audio discs and tapes	0.35	0.21	0.04	0.12
159 Video equipment	0.48	0.46	0.30	0.51
160 Rental of videotapes and videodiscs	0.25	0.20	0.01	0.06
161 Purchase of videotapes and videodiscs	0.11	0.08	0.02	0.08
162 Other home entertainment services and equipment	0.09	0.10	0.08	0.08
163 Hotels and motels	0.57	0.27	0.49	0.65
164 Other traveller accommodation	0.43	0.18	0.10	0.37
165 Travel tours	0.66	0.24	0.46	1.24
166 Spectator entertainment (excluding cablevision)	0.48	0.26	0.16	0.31
167 Cablevision (including pay TV)	0.57	0.70	0.84	0.76
168 Use of recreational facilities and services	0.84	0.41	0.40	0.75
169 Tuition fees	0.86	0.80	0.01	0.23
170 School textbooks and supplies	0.29	0.30	0.00	0.05
171 Other lessons, courses and education services	0.21	0.07	0.02	0.04
172 Newspapers	0.31	0.32	0.58	0.56
173 Magazines and periodicals	0.20	0.16	0.16	0.23
174 Books (excluding textbooks) and other printed matter	0.23	0.14	0.08	0.15
175 Served beer	0.57	0.73	0.26	0.30
176 Served wine	0.18	0.09	0.08	0.13
177 Served liquor	0.22	0.24	0.02	0.15
178 Beer purchased from stores	0.99	1.41	0.99	0.74
179 Wine purchased from stores	0.47	0.41	0.41	0.50

**Table C**

**Distribution of expenditures for the consumer price index for Canada: CPIs for the reference population (official), low-income households, low-income senior citizens, and senior citizens, in 1992 prices (continued)**

	<b>Official CPI</b>	<b>Low-income households</b>	<b>Low-income senior citizens</b>	<b>Senior citizens</b>
180 Liquor purchased from stores	0.54	0.58	0.96	1.03
181 Cigarettes	2.18	2.34	1.24	1.84
182 Other tobacco products and smokers' supplies	0.33	0.79	0.51	0.38