

APPENDIX - PRICES AND PRICE INDEXES, FEBRUARY, 1943

DOMINION BUREAU
OF STATISTICSREVISED EXPLANATION AND DESCRIPTION OF THE DOMINION BUREAU OF STATISTICS
COST OF LIVING INDEXPROPERTY OF THE
LIBRARYINTRODUCTORY NOTE:

This memorandum describing the official cost-of-living index replaces the original statement, the supply of which has been exhausted. The present memo gives more attention to interpretation, and notes several minor adjustments in weights which have been made in accordance with the Bureau's practice of keeping the index in line with major changes in consumption.

PURPOSE:

The Dominion Bureau of Statistics cost-of-living index measures the influence of changes in retail prices of commodities and services upon the cost of a representative urban wage-earner family budget. The index is specified by Order-in-Council P.C. 5963 as the basis for cost-of-living bonus adjustments authorized under the terms of this order.

INTERPRETATION:

It should be clearly understood that the index is a measurement of price change. Many people use the term "living costs" to indicate the total cost of things they buy. Used in this sense, "living costs" may include different things from month to month and year to year, and likewise different amounts and qualities of the same things. A cost-of-living index based upon this idea would simply reflect the value of total purchases made by everyone. In normal times it would move closely in line with estimates of national income. The Bureau's index is based upon a quite different idea. It measures changes in the cost of a family budget which includes the same amounts of the same commodities and services for considerable periods of time; it is revised only to take account of important "long-run" changes in consumption. It is, therefore, essentially an index which measures changes in prices.

Each index is a percentage which shows the relationship between the dollar value of the index budget for a specified period, and the corresponding dollar value of the same budget in a reference period. The Bureau's standard reference period includes the five years 1935 to 1939. The average value of the index budget for this period is represented by 100.0. The value of the same budget in August, 1939 was 100.8 per cent of the reference budget, and the corresponding value for December, 1942 was 118.8 per cent. These figures become the cost-of-living index numbers for August, 1939 and December, 1942.

Because August, 1939, the last pre-war month, provides the basis for cost-of-living bonus adjustments, it is frequently used as a reference period. The procedure in this case is essentially the same as that described above. The value of the index budget in August, 1939 is considered as 100.0, and budget values for other months are computed as percentages of the August, 1939 value. The December, 1942 index then becomes 117.9. Indexes related to the August, 1939 budget value have become widely known as the "adjusted" indexes. They may be computed by dividing the original August, 1939 index of 100.8 into the comparable index for any other period, e.g., the December, 1942 index of 118.8 divided by 100.8 gives 117.9.

THE INDEX BUDGET:

A complete list of items in the cost-of-living budget, together with percentages indicating the relative importance of individual items and groups of items is listed below. The basis upon which this list was selected has been described in detail in an earlier release "Living Costs in Canada, 1940". The index budget represents annual purchases reported by a group of 1,439 typical wage-earner families in the following cities: Charlottetown, Halifax, Saint John, Quebec, Montreal, Ottawa, Toronto, London, Winnipeg, Saskatoon, Edmonton and Vancouver. These expenditures covered the year ending September, 1938.

The survey families averaged 4.6 persons and the majority had two or three children. Family earnings in many cases were supplemented by other minor sources of income; total incomes for these families were heavily concentrated between \$1,200 and \$1,600. They ranged, however, from as low as \$600 up to about \$2,800 per annum. There were approximately two tenant families to every one home-owning family, and about one family in three operated a motor car. The general distribution of living expenditures for these families which represented all the principal racial groups in Canada was as follows:

Urban Wage-Earner Family Annual Living Expenditures
(Year ending September 30, 1938)

Budget Group	Expenditure Averages	Percentage Distribution
Food	\$ 443.0	31.3
Shelter	269.5	19.1
Fuel and Light	90.5	6.4
Clothing	165.8	11.7
Home Furnishings	125.7	8.9
Miscellaneous	319.4	22.6
Health	(60.8)	(4.3)
Personal Care	(23.9)	(1.7)
Transportation	(79.3)	(5.6)
Recreation	(82.1)	(5.8)
Life Insurance	(73.3)	(5.2)
TOTAL	1,413.9*	100.0

* Directly represented in the index. Other miscellaneous outlay brought the total family living expenditure to \$1,453.8.

Minor changes were made in the index budget in January, 1943 to take account of wartime changes in consumption, and adjustments were made in such a way that the index continues to reflect price changes only. The revised budget measures percentage changes in prices from January, 1943 forward, but does not show increases or decreases reflecting weight differences. In other words, the value of the January, 1943 adjusted budget is exactly the same as the value of the budget it replaces.

The following items have been removed from the revised budget: coke, automobile tires and tubes, steel frying pans and bananas. These are all items which are not available in quantity to the general public. Downward weighting adjustments have been made for tea, sugar and motor operating costs. Weight removed from motor operating costs has been transferred to the recreation sub-group, since the reduction in motor operating costs represents mainly a reduction in

recreational driving. The weights of deleted food items and reductions for tea and sugar have been prorated among other items in the food index. No change has been made in weights for coffee and butter. The present weight for butter provides a weekly per capita allowance of only 0.1 pounds per week above the ration allowance, and the change involved in coffee would be even smaller. Such changes are not of sufficient importance to warrant weight adjustments. The steel frying pan weight has been added to the weight for cast iron frying pans. The question of weight adjustments is under constant consideration and other changes may be made and announced from time to time to keep the index budget in line with changing consumption.

Commencing July, 1942, a change was made in the treatment of taxes on cigarettes and tobacco. Prior to that time changes in all indirect taxes affecting consumer prices had been reflected in the index. By Order-in-Council P.C. 6219 as amended, the tax imposed on June 24, 1942, on cigarettes and tobacco was excluded from indexes calculated for the purpose of reckoning cost-of-living bonuses.

The Bureau continues to publish in the monthly bulletin "Prices and Price Indexes", a cost-of-living index which reflects all indirect taxation.

COMMENTS ON GROUP INDEX NUMBERS

The index budget is divided into six expenditure groups for which separate indexes are calculated: these are foods, fuel and light, rent, clothing, homefurnishings and services, and miscellaneous items. Each group contains a list of items sufficiently large to make it representative of the merchandise field covered. It would be possible to add many more minor items without affecting the movements of the composite cost-of-living index by any significant amount. These additions would lengthen the time required to calculate the index and impose a greater burden upon firms making price reports, without making a corresponding improvement in the accuracy of the index. In many cases, accuracy might be reduced as comparisons on a quality, or specific quantity basis are not possible over a long period. This would be true of style merchandise such as women's hats, and also for fresh vegetables, which are frequently sold in bunches. The cost of all these omitted items is included in group weights, which represent all expenditures falling within the six groups noted above. The base period food weight of 31 per cent, for example, was reckoned from total food costs reported by survey families, although the food index includes only 45 items which represent about 75 per cent of a representative family's food expenditure.

FOODS: Prices used in calculating food indexes are collected on the first business day of each month from approximately 1,600 stores including independent and chain grocers and butchers. Quotations for each of the 45 budget items are averaged and then multiplied by the budget quantity for each individual item to find the cost for that item. These individual cost figures are added together to find the total cost of the food budget; this figure is then expressed as a percentage of the corresponding reference period cost to find the food index.

FUEL AND LIGHT: From January, 1943, the fuel and light index has been based upon changes in prices for coal and domestic rates for electricity and gas. Coke prices formerly were included for Quebec and Ontario cities. Separate indexes are calculated for coal, gas and electricity. The two last mentioned are reckoned from monthly bills for quantities which are typical of consumption in the cities represented. The bill for each city is weighted by the number of domestic consumers in order to calculate Dominion indexes. The coal index also takes

account of typical amounts consumed in different areas and of the population of each city represented in the index. Price changes for coal are related to kinds most used in each area.

RENTS: There are two tenant wage-earner families for every home-owning wage-earner family in Canada, and the cost-of-living index is calculated on the assumption that housing costs generally are reflected in rental trends. Rental surveys are made by the Bureau at the May and October leasing periods. Rental agents are asked to report upon the current position of rents relative to those at the preceding lease date, as indicated by their list of rental properties. In the workmen's group of dwellings, upon which the rental index is based, records are collected for houses, flats and apartments. Before reporting blanks are sent out, rent data and property descriptions reported by each agent for the last period are copied onto the new schedule in order to maintain continuity from period to period. The calculation of the rent index is similar to that for the fuel and light series, with two subgroup indexes being reckoned first for houses, and flats and apartments. Very complete weighting data have been used, recognizing the different numbers of each type of dwelling in various centres. Approximately 200 reports from 61 cities are used in making rental indexes.

CLOTHING: The clothing index has been based upon a carefully selected list of men's and women's apparel. It includes no children's clothing, and omits some items of adult clothing which are of considerable importance, such as women's dresses for afternoon and evening wear, women's hats, men's hats and gloves. Unusual difficulties in maintaining continuous price series on the same quality of goods occur in clothing due to style and seasonal changes which must be excluded from price comparisons based upon quality. The items in the clothing index have been selected to represent the basic materials entering into clothing in approximately the same proportions as they would be found in a complete clothing budget. Some of the items chosen to represent basic materials form a comparatively small portion of a complete budget, but are useful in measuring clothing price trends because of their standard construction. Women's woollen hose afford an examples of such items. The index contains 31 items of clothing, piece goods and footwear, and price series for these have been examined individually over a period of years to test their reliability. Most apparel is composed of five basic materials, cotton, wool, artificial silk, leather, and rubber. The Bureau has reduced its clothing list on the assumption that 31 accurate price series will measure the trend of clothing prices better than a large list including items which fluctuate widely in price due to style and seasonal factors. Department stores are the source of Bureau clothing prices. These distributors handle approximately one-third of the Dominion's clothing trade, and make monthly price returns to the Bureau, especially designed for the cost-of-living index.

HOMEFURNISHINGS AND SERVICES: The homefurnishings and services index is a composite of eight sub-groups, including two sets of service costs in addition to actual furnishings. The eight sub-groups are: furniture, floor coverings, textile furnishings, hardware, dishes and glassware, cleaning supplies, laundry and telephone. The complete group accounted for 9 per cent of the base period index budget cost, placing it next to clothing in importance. It approximates clothing also in many details of construction. The data for furniture, floor coverings, textile furnishings, hardware, dishes and glassware are obtained from department stores and the same principle of the representation of basic materials by a comparatively small number of items is used. There are 7 items of furniture, 3 of floor coverings, 4 of textile furnishings, 4 of hardware, 2 of dishes and glassware, 4 of cleaning supplies, 3 laundry rates and one type of telephone service.

MISCELLANEOUS: Five sub-groups, health maintenance, personal care, transportation, recreation and life insurance comprise the miscellaneous index. This list does not exhaust all remaining family living expenditures, but most of those which are left such as church contributions, the support of dependents, bank savings, etc., cannot be treated in the same way as items which are bought and sold. The index takes no account of these items which amounted to only 3 per cent of average wage-earner family living expenditures reported in the Bureau's 1938 survey.

The health section is based upon prices for 6 items of household medical supplies, 2 kinds of hospital service, 3 types of doctors' fees, and rates for 6 types of dental service. In view of the stability of fees for doctors, dentists and hospitals, these records are collected only at annual intervals, while medical supplies are priced quarterly. Records for practically all miscellaneous sub-indexes are collected from 23 of the larger cities, chosen to give adequate regional representation.

Personal care costs are represented by 7 items of toilet requirements plus fees for men's haircuts and shaves.

Three kinds of transportation are represented in the transportation sub-group: motor car, street car and railway. The two latter present no special problems, but motor car operating costs are more difficult to measure. The Bureau's record is based upon service station prices of gasoline, license fees, and wage rates for garage mechanics. It is assumed that depreciation is 37 per cent of operating costs, and that for car owners as a group it remains constant from year to year.

The recreation section includes records of motion picture theatre admissions, and newspaper, magazine and tobacco costs.

The life insurance index is based upon premiums for ordinary non-participating life policies, since these appear to give the closest possible approximation to the cost of pure risk. Averages of premiums for ages 20, 35 and 50 years have been used covering the records of 11 large companies.

THE COST-OF-LIVING INDEX WEIGHTING SYSTEM

There are two stages in the calculation of each of the six principal group indexes from which the composite number is calculated. In the first stage, the general procedure is to multiply current price averages by budget quantities. These products are added together and the resultant aggregate divided by a corresponding base period aggregate. The resultant number is multiplied by 100.0 to secure a sub-group index for the current period. This index is then multiplied by a sub-group weight indicative of the cost of goods in this sub-group relative to all goods in the group. When all sub-groups have been weighted similarly, the group index is found by adding up this second set of products and dividing by 100.0. This routine is repeated to secure the final composite cost-of-living index. The second and third stages of weighting are made necessary by the fact that it is not feasible to include all items in the family budget.

The complete list of items and weights is shown following:

WEIGHTING SYSTEM OF THE DOMINION BUREAU OF STATISTICS COST-OF-LIVING INDEX

		Cost of Food Items as a Percentage of Total Food Budget	Sub-Group Weight	Group Weight
<u>Commodity Weights</u> (Weekly Quantities)		<u>January, 1943</u>		
A. FOOD				31
1. <u>CHAIN STORES</u>			1	
2. <u>INDEPENDENT STORES</u>			2	
<u>Dairy Products</u>				
Milk	10.5 qts.	12.3		
Butter	2.8 lbs.	12.2		
Cheese	.4 "	1.5		
<u>Eggs</u>	1.4 doz.	7.9		
<u>Meats and Fish</u>				
Sirloin Steak	.5 lbs.	2.1		
Round Steak	.9 "	3.7		
Rolled Rib Roast	.7 "	2.8		
Blade Roast	1.1 "	3.1		
Stewing Beef	1.0 "	2.6		
Veal	1.0 "	3.0		
Lamb	.3 "	1.2		
Pork, fresh loins	1.5 "	5.9		
Pork, fresh shoulder	1.0 "	3.0		
Bacon	.7 "	3.6		
Canned Salmon, 1b. tin	.2 tins	0.5		
Finnan Haddie	.1 lbs.	0.3		
Vegetable Shortening	.8 "	1.7		
Lard	.2 "	0.4		
<u>Cereals</u>				
Bread	12.1 lbs.	8.8		
Flour	2.9 "	1.3		
Rice	.3	0.4		
Rolled Oats	.5	0.3		
Corn Flakes, 8-oz. pkg.	1.3 pkgs.	1.3		
<u>Dry Groceries</u>				
Granulated Sugar	3.0 lbs.	2.9		
Yellow Sugar	.5 "	0.5		
Tea	.2 "	1.7		
Coffee	.2 "	1.0		
Cocoa, $\frac{1}{2}$ -lb. tin	.2 tins	0.4		
Salt	.5 lbs.	0.2		
<u>Vegetables</u>				
Beans	.2 lbs.	0.1		
Onions	.8 "	0.4		

		Cost of Food Items as a Percentage of Total		Sub-Group Weight	Group Weight
		Food Budget January, 1943			
A. <u>FOOD</u> - Concl'd	Commodity Weights (Weekly Quantities)				
<u>Vegetables</u> - Concl'd					
Potatoes	.8 pecks	3.7			
Canned Tomatoes, 2½'s	.6 tins	0.9			
Canned Peas, 20 oz.	.6 "	0.9			
Canned Corn, 20 oz.	.3 "	0.5			
Canned Beans, 16 oz.	.5 "	0.5			
<u>Fruits</u>					
Raisins	.2 lbs.	0.3			
Currants	.1 "	0.2			
Prunes	.1 "	0.1			
Strawberry Jam	.6 "	1.2			
Marmalade	.1 "	0.2			
Canned Peaches, 20 oz.	.1 tins	0.2			
Corn Syrup, 3½-lb. jar	.03 jars	0.7			
Lemons	.1 doz.	0.5			
Oranges	.7 "	3.0			
<u>B. RENTALS</u>					
Houses			70		19
Apartments and Flats			30		
<u>C. FUEL AND LIGHT</u>					
Coal			53		6
Gas			14		
Electricity			33		
<u>D. CLOTHING</u>					
	(Annual Replacement Allowances)	Cost of Cloth- ing Items as a Percentage of Total Cloth- ing Budget January, 1943			12
<u>Men's Wear</u>				41	
Top Coats	.4	7.6			
Suits	.8	16.6			
Sweaters	.4	1.3			
Overalls	1.0 pair	1.3			
Socks	9.0 pairs	4.6			
Underwear, Athletic	1.5 sets	1.0			
Balbriggan Combinations	1.0 set	.7			
Underwear, winter	1.0 "	2.1			
Pajamas	1.0 pair	1.7			
Shirts, work	1.0	.8			
Shirts, broadcloth	2.5	3.3			
<u>Women's Wear</u>				36	
Top Coats	.5	12.1			
House Dress	1.5	3.4			

	Commodity Weights (Annual Replacement Allowances)	Cost of Cloth- ing Items as a Percentage of Total Cloth- ing Budget January 1943	Sub-Group Weight	Group Weight
D. <u>CLOTHING - Concl'd</u>				
<u>Women's Wear</u> Concl'd				
Slips, rayon	2 5	2.5		
Hosiery, rayon	10 0 pairs	7.2		
Hosiery, woollen	3 0 "	3.1		
Vests, rayon	1 0	.7		
Bloomers, rayon	4 0	2.9		
Bloomers, wool	1 0	1.0		
Nightgown, cotton	.7	.7		
Nightgown, rayon	1 6	2.0		
Smock	2	.4		
<u>Piece Goods</u>			4	
Cotton Dress Print	3 0 yards	1.4		
Wool	3 "	.6		
Flannel	2 "	.3		
Celanese or Rayon Material	.7 "	1.1		
Flannelette	2 0 "	.6		
<u>Footwear</u>			19	
Men's Work Boots	2 0 pairs	5.2		
Men's Oxfords	.7 "	3.7		
Men's Rubbers	3 5 "	2.3		
Women's Shoes	2 0 "	7.8		
Cost of Home- furnishings Items as a Percentage of Homefurnishings and Services Sub-Group Budgets				
E. <u>HOMEFURNISHINGS AND SERVICES</u>				
<u>Furniture</u>			33	
Dining Room Suite, 9 pc	.06 sets	12.0		
Bedroom Suite, 4 or 5 pc.	.06 "	10.9		
Kitchen Table	.08	.7		
Kitchen Chairs	.20	.4		
Studio Couch	.08	5.5		
Bed Springs	.05	.6		
Mattress	.16	2.9		
<u>Floor Coverings</u>			9	
Axminster Rug, 9'x 12'	.04	4.6		
Congoleum Rug, 9'x 12'	.15	1.9		
Linoleum (square yards)	1 70	2.5		
<u>Furnishings</u>			15	
Sheets, 81"x 100"	1 0	3.5		
Towels, cotton terry, 22"x44"	3 0	4.5		

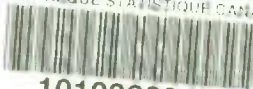
	Commodity Weights (Annual Replacement Allowances)	Cost of Home- furnishings Items as a Percentage of Homefurnishings and Services Sub-Group Budgets January 1943	Sub-Group Weight	Group Weight
E. HOMEFURNISHINGS AND SERVICES - Concl'd				
<u>Furnishings - Concl'd</u>				
Blankets, all wool, 6-8 lbs. 72"x 90"	.5	6.6		
Table Oil Cloth	.4 yards	.4		
<u>Hardware</u>			3	
Frying pan, iron	.3	.4		
Saucepan, enamel, 2½ or 3 qts.	.5	.5		
Garbage can, galvanized	.25	.8		
Kitchen Broom	1.0	1.3		
<u>Dishes and Glassware</u>			2	
Set of Dishes	.1	1.6		
Glass Tumblers	2.0	.4		
<u>Cleaning Supplies</u>			17	
Laundry Soap	24 bars	2.5		
Soap Flakes	24 packages	12.1		
Abrasive Cleansers	9 cartons	1.9		
Chloride of Lime	2 packages	.5		
<u>Laundry</u>			6	
Sheets)		2.0		
Towels) Geometric		2.0		
Men's Shirts) Average		2.0		
<u>Telephones</u>			15	

		Cost of Medicine Items as a Percentage of Medicine Budget	Per Cent	
F. MISCELLANEOUS ITEMS				23
1. HEALTH				
(a) Medicines			23	17
Aspirin Tablets,				
box of 12	1.3	15.1		
Epsom Salts, 1 lb.	.7	4.1		
Boracic Acid, 2 ozs.	.3	1.6		
Tincture of Iodine,				
1 oz.	.7	7.4		
Zinc Ointment, 1 oz.	.7	5.2		
Cod Liver Oil, large				
bottle	1.3	6.6		

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	Per Cent	Sub-Group Weight	Group Weight
3. <u>TRANSPORTATION</u> - Concl'd (Percentages)			
(a) <u>Motor Operating Costs-</u> Concl'd			
Licenses	9		
Depreciation	37		
(b) <u>Rail Fares</u>	5		
(c) <u>Street Car Fares</u>	46		
4. <u>RECREATION</u>		31	
(a) <u>Theatre Admissions</u>	23		
(b) <u>Newspaper Costs</u>	22		
(c) <u>Magazine Costs</u>	4		
(d) <u>Tobacco Costs</u>	51		
Cigars) Geometric			
Cigarettes) Average			
Cut Tobacco)			
5. <u>LIFE INSURANCE</u>		22	

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