$$
6^{2-D-24} \quad 1942
$$

In September 1940, the Dominion Bureau of Statistics commenced publication of a new cost of living index which replaced the Bureauls former index established in 1927, and also the cost of living index of the Dominion Department of Labour. The Bureau received the active assistance and co-operation of the Wartime Prices and Trade Board and the Dominion Department of Labour in this project. The following statement upon the new index is, in part, an amplification of an earlier bulletin entitied "An Official cost of Living Index for Canadal'.

## FURPOSE OF THE INDEX

This new index of living costs has been designed to provide an official record of movements in the general cost of living of urban wage-earner families in Canada. The budget upon which it is based remains unchanged from month to month and year to year, taking no account of fluctuations in income levels due to changes in wages and direct taxation. However, it reflects movements in sales taxes which affect the cost of items in the budget. It is the purpose of the index to measure changes in the cost of maintaining a constant budget over a considerable period of time.

## PROCEDURE IN ESTABLISHING THE INDEX BUDGET

The cost of living index budget has been established from expenditure records secured especially for this purpose in 1938. The Bureau made every effort to ensure that the family expenditure records collected in 1938 came from families which were typical. Before the records were obtained a careful study of 1931 census data was made to discover the main characteristics of typical urban families. The results of that study led the Bureau to concentrate upon securing expenditure records from families satisfying the following conditions:

1. Husband and wife living in the home as foint heads, with from one to five children.
2. Self-supporting during the survey year, with family earnings ranging from $\$ 450$ to $\$ 2,500$ during that period.
3. Living in self-contained dwelling units, not sharing either kitchen or bathroom facilities with other families.

A special preliminary canvass of 12 cities chosen for the 1938 survey was made to locate families meeting the above requirements. Approximately 50,000 homes were visited in this preliminary stage of the survey, and from the returns sent in by the field staff, the Bureau sorted out the families which were eatisfactory accordifig to the criterta noted above. From this list a random group of families was approached for complete aninual records of income and expenditure. Bach family provided a detailed account of expenditures in the year ending September 1938, and in addition kept a journal of individual food purchases in three separate weeks, the first in October - November 1938, the second in February 1939, and the final one in June 1939. The food index budget quantities were computed from these weekly records. The cities included in the 1938 survey were Charlottetown, Halifax, Saint John, Quebec, Montreal, Ottawa, Toronto, London, Winnipeg, Saskation, Edmonton and Vancouver.

The 1,439 families for which records were collected, averaged 4.6 persons, and the majority had two or three children. Family earnings in many cases were supplemented by other small sources of income, and total family incomes between $\$ 1,200$ and $\$ 1,600$ were the most common. There were approximately two tenant families to every homeowning 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-TARNER FAMILY ANNUAL IIVING EXPENDITURES
(Year ending September 30, 1938)



## BASE PBRIOD, 1935-1939=100

In selecting a new period to replace 1926, the Dominion Bureau of Statistics had to consider many types of indexes other than those for prices. Kmployment, industrial production, and car loadings were some of the series involved, and it was difficult to find a recent l2-month period which would provide a generally satisfactory reference level. For both prices and industrial production the years 1935-9 offered a period of rise and fall which tended to minimize differences in the base levels of various series relative to earlier periods. Although prices in the last four months of 1939 were affected by the outbreak of war, neither prices nor industrial activity reacted sufficiantly in that interval to affect a five-year average materially. The years 1935-9 provide a base which is representative of pre-war conditions, and at the same time give a reference level for comparison with average conditions obtaining subsequent to recovery from the depression from 1929 to 1933. The 1935-1939 period had previously been selected by the United States central statistical Board for the calculation of revised index numbers for the United Stater.

## RRICH COV

The character of price movements for commodities and services differs widely, For some, including certain foods, rentals and car fare, local conditions may be a governing factor, while for others, such as tobacco and periodicals, a single price may be Dominion-wide. Some commodities fluctuate considerably in price, while others are characteristically stable. These considerations have led to differences in the number of cities covered and in the number of reports received to build up satisfactory Dominion urban averages. One report on car fare for each city gives perfect coverage, whereas many rejerts are required for foods in large cities such as Montreal and Toronto. Interest in local differences in particular budget groups has resulted in a more complete representation of cities than would be required for Dominion averages alone. This is true of foods, fuel, rents, and certain services, On the other hand, comparative uniformity in clothing price trends over considerable areas, and a high proportion of sales by large selling organizations made it necessary to obtain a much smaller number of reports for items in this budget group. The following summary of reports received and the number of cities reprec sentad should be judged in the light of the foregoing remarks.

PRICE REPORTING BASIS OF THE NWW DOMINION BUREAU OF STATISTICS COST OF IIVING INDEX

| Budget Groups and Sub-Groups | Frequency of Reports | $\begin{aligned} & \text { Number of } \\ & \text { Cities } \\ & \text { Represent ed } \end{aligned}$ | Approximate Number of Reports Received |
| :---: | :---: | :---: | :---: |
| Food. ...................................... | Monthly | 69 | 1,600 |
| Rentals | May and October | 61 | 200 |
| Fuel - Coal .............................. | Monthly | 58 | 330 |
| Coke .............................. | " | 26 | 200 |
| Gas | " | 16 | 16 |
| Electricity | " | 109 | 109 |
| Clothing and Home Furnishings ......... | Monthly | 11 | 24 |
| Miscellaneous - |  |  |  |
| Medicines ........................ | duarseri?y | 23 | 82 |
| Car Fare ....................... | Monthly | 18 | 18 |
| Theatre Admissions . ............. | " | 23 | 1 |
| Insurance | Annually | All Canada | 11 |
| Tobacco | When prices change | All Canada | 1 |
| Newspapers . . . . . . . . . . . . . . . . . . | Monthly | 22 | 43 |
| Periodicals ...................... | Annually | All Canada | 6 |
| Doctor ........................... | " | 22 | 103 |
| Dentist .......................... | 1 | 37 | 61 |
| Hospital ......................... | " | 23 | 57 |
| Laundry . . . . . . . . . . . . . . . . . . . . | " | 23 | 76 |
| Cleaning Supplies ............... | Monthly | 23 | 347 |
| Barbers Fites ................... | 1 | 23 | 85 |
| Toilet Articles ................. | Quarterly | 23 | 82 |
| Telephones ....................... | Monthly | 23 | 23 |
| Motor Operating Costs .......... | $\pi$ | 23 | 15 |

The Jureau's new index follows the usual pattern of such series in dividing living oosts into principal expenditure groups and calculating price indexes for separate groupe, as follows: foods, fuel and light, rent, home furnishings and services, and miscellaneous items. Comments upon the items included in these groups and the sources of prices for them are given in the following paragraphs.

## FOODS

The food index includes 46 price series which is the same number as in the old. There are now 14 items of meats and fish, milk, butter, cheese, eggs, 5 cereals, 6 dry groceries including sugar, tea, and coffee, 7 vegetables, and 10 items classed as fruits.

The revised selection of foods made necessary a new set of forms for the collection of price records. In drafting these a special effort was made to concentrate on representative qualities and sale units. Regional differences make this difficult; in some areas jammith pectin prodominates, in others pure jam is preferred; some stores sell bananas by the dozen, others by the pound; in one large area it is difficult to get quotations on rolled oats. The record of food price changes is computed from returns recelved at the beginning of each month from approximately 1,600 grocers and butchers representing both chain and independent stores. Besides Dominion averages, separate averages for 69 cities are also computed. Dominion average prices for the 46 index foods are multiplied by budget quantities reported by the 1938 survey families and the aggregate of these products is divided by a corresponding aggregate for the base period 19351939 to get a Dominion index each month. Foods are allotted 31 p.c. of family living expenditure in the new index as compared with 30 p.c. in the old.

## FURL AND LIGHT

The fuel and light index is computed from four sub-indexes for coal, coke, ges, and electricity. There are four quite different coal consuming areas, the Maritime Provinces burning chiefly Nova Scotia coal, Quebec and Ontario using predominantly British and American anthracite, the Prairies covered mainly by Alberta domestic, and Britieh Columbia with its own bituminious coal. This means four separate sets of coal reporting cards to be sent to these areas each month, and the calculation of city averages based upon types predominant in that area.

In computing fuel and lighting sub-group indexes account is taken of the amount of coal, coke, gas and electricity which is typical of consumption in each area. In the case of gas and electricity, city data are available for this purpose, but for coal and coke regional records are used. The coal index includes data from 58 cities; the coke index, 26 cities in Quebec and Ontario; the gas index, 16 cities in all parts of the Dominion; while the electricity index includes all urban communities in Canada. Wood was removed from the new index, although it is still an important fuel in some centres. Tests computing the fuel index with and without wood showed only slight differences. The weight for fuel and lighting remained unchanged at $6 \mathrm{p}, \mathrm{c}$. of the family budget in the new index.

## RENTS

There are two tenant wage-earner families for every home-owning wagemearner 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 coslected 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 sub-group indexes being reckoned first for houses, 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. Rent accounts for 19 p.c. of the new index budget as compared with $20 \mathrm{p}, \mathrm{c}$. of the old.

The olothing index has been based upon a carefully selected list of men ${ }^{\text {s }}$ and women＇s apparel．It ineludes no childrenis clothing；and omits some items of adult clothing which are of considerable importance．such as womenis dresses for afternoon and evening wear．woments hats，men：s hats and gloves．Unusual difficulties in maintaining continuous price sezies on constant quality of goods occux in clothing due to style and seasonal changes which must be excluded from price comparisma based upon quality．The items in the new cluting inder have becn selected to repreast the basic materials entering into clothlng in apmoximately the sang proportions as they would form in a complete clothing budget．Some of the itoms whesen to represent basic materials form a comparatively small portion of a complete budget，but are useful in measuring clothing price trends because of their stancard construction Women＇s woollen hose afford an example of such items．The new ladex contains 31 items of clothing，piece goods and footwear，and price series for wa have been examined individually over a period of years to test their reliability．In the final ana．lysis most apparel is composed of six basic materials cotions wooj，artificsel silk，real silk，leather，and rubber．The Bureau has reduced its clothing list on the asfumption that 31 accurate price series will measure the trend of clothing prices better then a iar ge list including items which fluctuate widsly fn price due to sylu and seasonal fiactore．Department stores are the principal source of Bureau clothing prices．These distributors hande approximately oner third of the Dominion？ s clothing trade and meke wonthly price returns to the Bureau， especially designed for the cost of living inaiox in ths new series clothing accounts for $12 \mathrm{p}_{0} \mathrm{c}_{\mathrm{o}}$ of the family budget as compared with $18 \mathrm{p}_{0} \mathrm{o}_{0}$ an the old index．

## HOIT FURNISHINGS AND SERVICES

The kwine furaishinge ani services inder is a composite of eight submgroups，in－ cludim－＋W，sots of service costs Es well ae actual furnishings．The eight subugroups furniture，floor coverings，texifie furishings，hardware，dishes and glassware，
 index budget cost，placing it next to ciothirg in importance．It approximates clothing also in many details of construction．The oata for furniture，floor coverings textile furnishings，hardware，dishes and ghassware are obtained mainly from department stores and the same pitinciple of the representation of basic materials by a comparatively small number of itemis is tised，There are 7 Items of furniture 3 of floor coverings， 4 of textile furnishirgas，5．of hardware， 2 of dishes and glassware， 4 of cleaning supplies， 3 laundry ratos and one type of telephone service．

## MISCBLIANEOUS

Tive sub ${ }^{\text {Fg }}$ oups health maintenawe，personal care，transportation recreation and life insurance comprise the miscellare jûe 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 saviags，etcos cannot be treated in the same way as items which are bought and sold．It does not seem logical to assume that they move as the whoje cost of living inder aues，or even as the miscellaneous group does．The reverse seems fust as ifkely to happerisioe。 if the prices of necessities move zharply upward in advance of income resiaual amounts for charity and cavings are bound to shrink，Therefore，tio incex takes no account of these items which amounted to only $3 \mathrm{p}_{\mathrm{o}} \mathrm{c}_{0}$ of average wage eanner family living expenditure reported in the Buret $\mathrm{in}^{2} \mathrm{~s} 1938$ survey．

The health gection fa 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 siability of fees for doctors，dentists and hospitals， these records are ellsctea only at snowil fintsrvals，while medical supplies are priced
 from 23 of the larger cfties，choeen to give adequate regional representation．

Personal care costs are representeu by ？items of toilet requirements plus fees for men！s hairciats and shaves．

Three kinas of traneportation aze represented in the transportation sub－group motor car．street car and rajlwsyo the two latter present no special problems，but motor car operating coste are more difficult to messure。 The Bureaus record is based upon service station prices of gesclino，list prices of tires and tubes，license fees， and wage rates for garage menaxics．It is assumed that depreciation is $35 p_{0} c$ of operating costs，and that for car owners es a group it remains constant from year to year．

The recreation section inciudes records of motien plcture theatre admissions, and newspaper, magazino and tobacco costs.

The life insurance index is based upen geaniuns for ordinary non-participating life policies, since these appear to give the clesest possible approximation to the cost of pure risk, Averages of premiums for ages 20,35 and 80 years have been used covering the records of 11 large companies.

The miscellaneous index receivas a welght of 23 p.c. In the new cost of ifing series as compared with 26 p.c. in the old one. This actually indicates an increase in importance since one-fourth of the wefght for the old miscellaneous index was given to home furnishings.

## THE COST OT EIVINO INDHX WSIGHMING SYSTMM

There are two stages in the oalculation 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 avarages 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 200.0 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 subgroups 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.
WEIGHTS USED TO CALCULATH THE NEW DOMINION SUR:AU OF STATISTICS COST OF LIVING INDEX

|  |  | Sub-group | Group |
| :---: | :---: | :---: | :---: |
|  | Commedty Yeights | Weight | Weight |
| A. TOOD | (Weekig Quantities) |  | 31 |
| 1. CHAIN STORES |  | 1 |  |
| 2. INDEPENDEENT STORES |  | 2 |  |


| Dairy Products |  |  |
| :---: | :---: | :---: |
| Malk | 10.5 | qts. |
| Butter | 2.8 | lbs. |
| Cheese | . 4 |  |
| Eggs | 1.4 | doz. |

Meats and Figh

| Sirloin Steak | . 5 | 1bs. |
| :---: | :---: | :---: |
| Round Steak | . 9 | H |
| Rolled Rib Roast | . 7 | " |
| Blade Roast | 1.1 | 11 |
| Stewing Beef | 1.0 | I |
| Veal | 1.0 | - |
| Lamb | . 5 | 『 |
| Pork, frash loins | 1.5 | " |
| Pork, fresh shoulder | 1.0 | $\pi$ |
| Bacon | .7 | \% |
| Canned Salmon, lb. tin | . 2 | tins |
| Finnan Haddie | .1 | Ibs. |
| Vegetable Shortening | . 8 | " |
| Lard | . 2 | 1 |
| Cereals |  |  |
| Bread | 12.1 | 1bs. |
| Flour | 2.9 | 日 |
| Rice | . 3 | N |
| Rolled Oats | . 5 | n |
| Corn Flakes, 8 oz. pkg. | 1.3 | pkgs. |


|  | . | Sub-group | Group |
| :---: | :---: | :---: | :---: |
|  | Commodity Weights | Weight | Weight |
| A. FOOD - Contld. | (Weekly Quantities) |  |  |
| Dry Groceries |  |  |  |
| Granulated Sugar | 4.2 lbs, |  |  |
| Yellow Sugar | . .6 I' |  |  |
| Tea. | .4 " |  |  |
| Coffee | . 2 " |  |  |
| Cocoa, 禀 1 b , tin | .2 tins |  |  |
| Salt | .5 lbs . |  |  |
| Vegetables |  |  |  |
| Beans | , 2 lbs . |  |  |
| Onions | . 8 " |  |  |
| Potatoes | . 8 pks, |  |  |
| Canned Tomatoes, $2 \frac{1}{2} 1 \mathrm{~s}$ | . 6 ting |  |  |
| Canned Peas, 16 oz. | .7 n |  |  |
| Canned Corn, 1602. | . 4 " |  |  |
| Canned Beans, 16 oz. | .51 |  |  |
| Fruits |  |  |  |
| Raisins | . 2 1bs. |  |  |
| Currants | . 1 " |  |  |
| Prunes | .1 In |  |  |
| Strawberry Jam | . 6 " |  |  |
| Marmalade | . 11 |  |  |
| Canned Feaches 16 oz . | .2 ting |  |  |
| Corn Syrup, 5 lb . tin | . $04{ }^{\text {n }}$ |  |  |
| Bananas | 1.21 bs . |  |  |
| Lemons | .1 doz. |  |  |
| Oranges | . 71 |  |  |
| B. RENTALS |  |  | 19 |
| Houses |  | 70 |  |
| Flats |  | 15 |  |
| Apartments |  | 15 |  |
| Q. FUEL AND LIGHT |  |  | 6 |
| Coal |  | 42 |  |
| Coke |  | 11 |  |
| Gas |  | 14 |  |
| Hlectricity |  | 33 |  |
| D. GLOTHING | (Annual Replacement Allowances) |  | 12 |
| Men's Wear |  | 41 |  |
| Top Coats | . 4 |  |  |
| Suits | . 8 |  |  |
| Sweaters | . 4 |  |  |
| Overalls | 1.0 pair |  |  |
| Socks | 9.0 pairs |  |  |
| Underwear, Athletic | 1.5 sets |  |  |
| Balbriggan Combinations | 1.0 eet |  |  |
| Underwear: winter | 1.0 set |  |  |
| Pajamas | 1.0 pair |  |  |
| Shirts, work | 1.0 |  |  |
| Shirts, broadcloth | 2.5 |  |  |
| Women's Wear |  | 36 |  |
| Top Coats | . 5 |  |  |
| House Dress | 1.5 |  |  |
| Slips, rayon | 2.5 |  |  |
| Hosiery, silk | 10.0 pairs |  |  |
| Hosiery, woollen | 3.0 " |  |  |
| Yests, rayon | 1.0 |  |  |


F. MISCELLANEOUS ITEMS

1. HEALTH
(a) Medicines

Aspirin Tablets, Box of 12 Epsom Salts, 1 pound Boracic Acid, 2 ounces Tincture of Iodine, 1 ounce Zinc Ointment, 1 ounce Scott's Fmalsion, large bottle 1.3

## (Anneval Replacement

 Allowances)2.3
.7
.3
(b) Hospital Charges

Semi-private Room Public Ward Bed
(c) Doctors! Fees

Office Consultation Ordinary Day Visit Ordinary Confinement
(d) Dentists Fees

Amalgam Filling Porcelain Filling Gold Filling
Upper and Lower Dentures Ordinary Extraction Prophylaxis

## 1

1

```
}
)Geometric
Average
```

| Camsodity Weiphts | Par <br> Cent | Sub-group <br> Weight | $\frac{\text { Group }}{23}$ |
| :--- | :--- | :--- | :--- |

17
2. PRRSONAL CARE
(a) Personal Cleaning Supplies

Talcum Powder, tins Tooth Paste, tubes Tooth Brushes Shaving Sticks Toilet Soap, bars Vaseline, Jars Razor Blades, packages of 5
(b) Barbers' Fees
Haircut (Mon's) Shave
(Annual Replacement 58 Allowances)
1.3
22.7
8.7
2.2
3. TRANSPORTATION
$\left\{\begin{array}{c}\text { Geometric } \\ \text { Average }\end{array}\right.$
42

| (a) Motor Operating Costs | (Percentages) |
| :---: | :---: |
| Gasoline | 42 |
| Tires and Tubes | 6 |
| Repairs and Maintenance | 9 |
| Licenses | 8 |
| Depreciation | 35 |

(b) Rail Fares 4
(c) Street Car Fares 29
4. RECREATION
(a) Theatre Admissions 23
(b) Newspaper Costs 22
(c) Magazine Costs 4
(d) Tobacco Costs 51

Cigars
Cigarettes $\quad\left\{\begin{array}{c}\text { Geometric } \\ \text { Average }\end{array}\right.$ Cut Tobacco

Average
5. LIEE INSURANCT

(anatasost





