2001 Food Expenditure Survey

Public-use Microdata Files

Income Statistics Division
Statistics Canada

Ce document est disponible en français sur demande.

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1. INTRODUCTION

1.1 General Information

These public-use microdata files contain information collected via the Food Expenditure Survey (FOODEX) in 2001 which was carried out in the 10 provinces of Canada, as well as Whitehorse, Yellowknife and Iqaluit. (Only records for the 10 provinces are included in these files.) Throughout 2001, households were asked to record, in detail, their expenditures on food for a period of two weeks.

The Food Expenditure Survey is a companion of the Survey of Household Spending which provides detailed information on all household expenditures, but only an overall estimate for food. The 2001 Survey of Household Spending was conducted in January, February and March 2002.

Seventeen food expenditure surveys have been carried out since 1953 (excluding the 2001 survey). Starting in 1972, they were conducted approximately every two years. Coverage for most of these surveys has been restricted to selected cities. Only five of the previous food expenditure surveys have also included smaller urban and rural areas to provide national coverage for the 10 provinces: 1969, 1982, 1986, 1992, and 1996.

The primary reason for collecting food expenditure data is to monitor and periodically update the weights used in the computation of the Consumer Price Index (CPI). In addition to this, food expenditure data classified by variables such as income, household type and province, provide the basis for a variety of analytical investigations of the food purchasing habits of households in Canada. For example, the survey data are used for market analysis and nutritional studies.

As in 1996, the public-use file for FOODEX actually consists of two files: the summary household file and the detailed food category file. The two files are linked by the household identification number and the diary week (1 or 2).

The summary household file has 11,034 weekly records and 79 variables. Not all households completed two diaries, so the number of weekly records is not quite twice the number of households represented (5,643).

The detailed food category file has 456,219 records and 7 variables. There is one record for each food category by week by type of store. For example, if a household purchases milk 4 times during the 2-week survey period as shown:

Week 1 in a supermarket
Week 1 again in a supermarket
Week 2 in a supermarket
Week 2 in a convenience store

There will be 3 records on the detailed food category files:

Record 1	total of both supermarket purchases of milk in week 1
Record 2	milk purchased in supermarket in week 2
Record 3	milk purchased in convenience store in week 2

Included in the Public-use Microdata File package are:

- this document,
- two microdata files,

- 2001 questionnaire (FE2) and diary (FE3),
- Food Expenditure in Canada, 2001 (62-554-XIE), and
- Excel file with appendices.

1.2 For Further Information

For more information, or to enquire about the concepts, methods or data quality of the 2001 Food Expenditure Survey, contact Client Services (1-888-297-7355; 613-951-7355; income@statcan.ca), Income Statistics Division.

2. SUMMARY HOUSEHOLD FILE

2.1 Technical Characteristics

CONTENT:	Household Food Expenditures, 2001
SOURCE:	Food Expenditure Survey in 2001 Income Statistics Division Statistics Canada
DATA SET NAME:	PUMD_FOOD2001_SUMMARY_FILEV1.TXT
NUMBER OF RECORDS:	11,034
FORMAT:	Fixed Length Record Size = 428 bytes
SEQUENCE CONTROL FIELD TITLE	“Identification Number” & “Week”

2.2 Record Layout of the Summary Household File

Field	Size	Implied decimal	Position	Type[1]	Description	Variable name
					Location	
1	5	0	1-5	n	Identification number	FLD01_Caseid
2	1	0	6	n	Week	FLD02_DiaryWeek
3	1	0	7	n	Quarter	FLD03_DV_Quarter
4	5	0	8-12	n	Weight	FLD04_Weight
5	1	0	13	n	Region	FLD05_DV_Region
6	1	0	14	n	Size of area of residence code	FL06_DV_Size_of_Area
					Characteristics of reference person	
7	1	0	15	n	Marital status of reference person	FLD07_DV_MaritalStatusRefPers
8	2	0	16-17	n	Age of reference person	FLD08_DV_AgeRefPers
9	1	0	18	n	Gender of reference person	FLD09_SexRefPers
					Characteristics of spouse of reference person	
10	2	0	19-20	n	Age of spouse	FLD10_DV_AgeSpouse
11	1	0	21	n	Filler - zero filled	FLD11_Filler_zero_filled
					Household description	
12	2	0	22-23	n	Household type	FLD12_DV_HhldType
13	2	0	24-25	n	Household size	FLD13_DV_SizeOfHhld
14	2	0	26-27	n	Number of seniors 65 years or more	FLD14_DV_NumPersAge65plus
15	2	0	28-29	n	Number of adults 25 to 64 years	FLD15_NumPersAge25to64
16	2	0	30-31	n	Number of youths 15 to 24 years	FLD16_DV_NumPersAge15to24
17	2	0	32-33	n	Number of children under 15 years	FLD17_DV_NumPersAge0to14
18	1	0	34	n	Number of economic families in household	FLD18_DV_NumberOfEFs
19	2	0	35-36	n	Income group code	FLD19_DV_IncomeCode
					Expenditures	
20	5	2	37-41	n	Number of meals received free or reimbursed while on trips overnight or longer	FLD20_B060
21	7	2	42-48	n	Total weekly food expenditure	FLD21_R501
22	7	2	49-55	n	Total food purchased from stores	FLD22_F550
23	7	2	56-62	n	Total food purchased from stores locally and on day trips	FLD23_F530
24	7	2	63-69	n	Meat purchased from stores locally and on day trips	FLD24_F001
25	7	2	70-76	n	Fish and other marine products purchased from stores locally and on day trips	FLD25_F111
26	7	2	77-83	n	Dairy products and eggs purchased from stores locally and on day trips	FLD26_F154
27	7	2	84-90	n	Bakery and other cereal products purchased from stores locally and on day trips	FLD27_F190
28	7	2	91-97	n	Fruits and nuts purchased from stores locally and on day trips	FLD28_F240
29	7	2	98-104	n	Vegetables purchased from stores locally and on day trips	FLD29_F316

30	7	2	105-111	n	Condiments, spices and vinegar purchased from stores locally and on day trips	FLD30_F395
31	7	2	112-118	n	Sugar and sugar preparations purchased from stores locally and on day trips	FLD31_F420
32	7	2	119-125	n	Coffee and tea purchased from stores locally and on day trips	FLD32_F436
33	7	2	126-132	n	Fats and oils purchased from stores locally and on day trips	FLD33_F445
34	7	2	133-139	n	Other foods, materials and food preparations purchased from stores locally and on day trips	FLD34_F455
35	7	2	140-146	n	Non-alcoholic beverages purchased from stores locally and on day trips	FLD35_F520
36	7	2	147-153	n	Food purchased from stores while on trips overnight or longer	FLD36_F547
37	7	2	154-160	n	Food purchased from restaurants locally and on day trips	FLD37_R001
38	7	2	161-167	n	Food purchased from restaurants while on trips overnight or longer	FLD38_R101
39	7	2	168-174	n	Food purchased from specialty stores locally and on day trips	FLD39_F701
40	7	2	175-181	n	Food purchased from convenience stores locally and on day trips	FLD40_F702
41	7	2	182-188	n	Food purchased from supermarkets locally and on day trips	FLD41_F703
42	7	2	189-195	n	Food purchased from other stores locally and on day trips	FLD42_F704
43	7	2	196-202	n	Food purchased from table service restaurants	FLD43_R506
44	7	2	203-209	n	Breakfasts purchased from table service restaurants	FLD44_R507
45	7	2	210-216	n	Lunches purchased from table service restaurants	FLD45_R508
46	7	2	217-223	n	Dinners purchased from table service restaurants	FLD46_R509
47	7	2	224-230	n	Between meals foods purchased from table service restaurants	FLD47_R510
48	7	2	231-237	n	Food purchased from fast food restaurants	FLD48_R511
49	7	2	238-244	n	Breakfasts purchased from fast food restaurants	FLD49_R512
50	7	2	245-251	n	Lunches purchased from fast food restaurants	FLD50_R513
51	7	2	252-258	n	Dinners purchased from fast food restaurants	FLD51_R514
52	7	2	259-265	n	Between meals foods purchased from fast food restaurants	FLD52_R515
53	7	2	266-272	n	Food purchased from cafeterias	FLD53_R521
54	7	2	273-279	n	Breakfasts purchased from cafeterias	FLD54_R522
55	7	2	280-286	n	Lunches purchased from cafeterias	FLD55_R523
56	7	2	287-293	n	Dinners purchased from cafeterias	FLD56_R524
57	7	2	294-300	n	Between meals foods purchased from cafeterias	FLD57_R525
58	7	2	301-307	n	Food purchased from other restaurants	FLD58_R526
59	7	2	308-314	n	Breakfasts purchased from other restaurants	FLD59_R527
60	7	2	315-321	n	Lunches purchased from other restaurants	FLD60_R528
61	7	2	322-328	n	Dinners purchased from other restaurants	FLD61_R529

62	7	2	329-335	n	Between meals foods purchased from other restaurants	FLD62_R530
63	7	2	336-342	n	Total food purchased from restaurants	FLD63_R200

					Number of meals purchased from restaurants	
64	5	0	343-347	n	Number of breakfasts purchased locally and on day trips	FLD64_R202
65	5	0	348-352	n	Number of lunches purchased locally and on day trips	FLD65_R203
66	5	0	353-357	n	Number of dinners purchased locally and on day trips	FLD66_R204
67	5	2	358-362	n	Number of breakfasts purchased while on trips overnight or longer	FLD67_R302
68	5	2	363-367	n	Number of lunches purchased while on trips overnight or longer	FLD68_R303
69	5	2	368-372	n	Number of dinners purchased while on trips overnight or longer	FLD69_R304
70	5	2	373-377	n	Total number of meals purchased from restaurants	FLD70_DV_TotalMeals
					Daily expenditure on food and beverages purchased from stores	
71	1	0	378	n	First day of diary	FLD71_FirstDayofDiary
72	7	2	379-385	n	First day's expenditure	FLD72_Day_1
73	7	2	386-392	n	Second day's expenditure	FLD73_Day_2
74	7	2	393-399	n	Third day's expenditure	FLD74_Day_3
75	7	2	400-406	n	Fourth day's expenditure	FLD75_Day_4
76	7	2	407-413	n	Fifth day's expenditure	FLD76_Day_5
77	7	2	414-420	n	Sixth day's expenditure	FLD77_Day_6
78	7	2	421-427	n	Seventh day's expenditure	FLD78_Day_7
					Additional variable	
79	1	0	428	n	Household record flag	FLD79_V010

2.3 Variable Descriptions for the Summary Household File

2.3.1 Location

Identification number

Each household has a unique five-digit number. The numbers begin at 00001 and end at 05643. The identification number enables the user to identify all records containing purchases by a household. Duplicate record numbers will be on the file for all households with two completed diaries. Along with the week number, the identification number links the summary household file to the detailed food category file.

Week

Code	Classification
1	Diary completed during the first week after the interview
2	Diary completed during the second week after the interview

Along with the identification number, the week links the summary household file to the detailed food category file.

Quarter

Code	Classification
1	Quarter 1
	January
	February
	March
2	Quarter 2
	April
	May
	June
3	Quarter 3
	July
	August
	September
4	Quarter 4
	October
	November
	December

Quarter refers to the period in time that the respondent replies. The survey sample is divided into 12 parts—one for each month in the calendar year. The first quarter covers the respondents starting the survey in January, February or March. If the respondent does not complete the questionnaire in the first assigned month, it may carry over to the second month.

Weight

In order to provide estimates applicable to the Canadian population in the 10 provinces, it is necessary to weight each record. This weight reflects the variation in sampling and response rates among geographic areas and household types. This weight is the same as the weight on the detailed food category file.

Region

Code	Classification
1	Atlantic (Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick)
2	Quebec
3	Ontario
4	Prairies (Manitoba, Saskatchewan, Alberta)
5	British Columbia

Size of area of residence code

Code	Classification
1	Urban: 30,000 and greater
2	Urban: Under 30,000
3	Rural
0	Size of area of residence code suppressed

Note: Sampled dwellings are assigned to size of area of residence groups depending on the 1996 population size (according to the 1996 Census boundary) of the metropolitan area, municipality, or urban area in which they are located. The following definitions of municipality, metropolitan area, urban area and rural area apply to these classifications.

Metropolitan Area: The overall concept for delineating metropolitan areas is one of a large urban area together with adjacent urban and rural areas that have a high degree of social and economic integration with this urban area. (For more detail, see the 1996 Census Dictionary, Catalogue no. 92-378-XPE).

Municipality: Municipality is defined as a census subdivision (as determined by provincial legislation) or its equivalent (for example, Indian reserves, Indian settlements and unorganized territories). For more detail, see the 1996 Census Dictionary, Catalogue no. 92-378-XPE).

Urban Area: For the Food Expenditure Survey in 2001 (based on the LFS sampling frame), urban areas include:

1. all larger metropolitan areas (even though they do contain some rural areas);

2. most smaller metropolitan areas (also called census agglomerations). Where a census agglomeration contains a large rural population, only the urban portion is considered urban.

3. urban areas based on the census definition: “Urban areas have minimum population concentrations of 1,000 and a population density of at least 400 per square kilometre, based on the previous census population counts”.

Rural Area: All territory outside urban areas is considered rural. Taken together, urban and rural areas cover all of Canada.

2.3.2 Characteristics of reference person

The household reference person is the member of the household listed on the questionnaire who is mainly responsible for its financial maintenance (e.g., pays the rent, mortgage, property taxes, electricity). This person can be either male or female. When all members of the household share equally in financial maintenance, any member may be designated the reference person.

Marital status of reference person

Code	Classification
1	Married or common-law (to a household member)
2	Never married (single)
3	Other (separated, divorced or widowed)

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 5.

Age of reference person

Code	Classification
24	Less than 25 years
25–69	Actual age
70	70 to 74 years
75	75 to 79 years
80	80 years and over

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 3.

Note: This variable represents age at time of interview. Prior to 1996, the age of the husband was used for couple households and the age of the reference person for all other households.

Gender of reference person

Code	Classification
1	Male
2	Female

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 4.

2.3.3 Characteristics of spouse of reference person

Age of spouse

Code	Classification
24	Less than 25 years
25–69	Actual age
70	70 to 74 years
75	75 to 79 years
80	80 years and over
99	No spouse

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 3.

Note: This variable represents age at time of interview.

2.3.4 Household description

Household type

Code	Classification
01	One person household
02	Couple without children
03	Couple with never-married children
04	Couple with additional persons (may include children)
05	Lone-parent household
06	Other household—all persons related
07	Other household—at least one person unrelated

Source
Questionnaire (FE2)
Section A. Household Composition,
Questions 2, 3 and 5.

Note: One-person households: The dwelling is occupied by only one person.

Couple households: Households where the married or common-law spouse of the reference person is a member of the household at the time of the interview.

This household type may be further broken down into couple households without children (without additional persons), with children (without additional persons) and with additional persons.

"Children" are never-married sons, daughters, or foster children of the reference person and may be any age. "Additional persons" include sons, daughters and foster children whose marital status is other than "single, never-married", other relatives by birth or marriage, and unrelated persons.

Lone-parent households: Households where no spouse of the reference person is present and there is at least one child (never-married son, daughter, or foster child of the reference person). The lone-parent households for which data are presented in this publication do not include any additional persons.

Other households: May be broken down into households composed of relatives only and households having at least one unrelated person. Relatives may include:

- sons, daughters and foster children of the reference person whose marital status is other than "single, never-married";

- relatives of the reference person by birth or marriage other than spouse, son, daughter, or foster child;

A household with at least one household member who is unrelated to the reference person (e.g., lodger, roommate, employee) is classified in *Other households, at least one person unrelated*.

Household size

This includes all persons who were members of the household at the time of the interview.

Code	Classification
01–05	Actual number of persons
06	6 or more persons

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 1.

Number of seniors 65 years or more

Code	Classification
00–01	Actual number of persons
02	2 or more persons

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 3; date of birth.

Note: This includes all persons who were members of the household at the time of the interview.

Number of adults 25 to 64 years

Code	Classification
00–01	Actual number of persons
02	2 or more persons

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 3; date of birth.

Note: This includes all persons who were members of the household at the time of the interview.

Number of youths 15 to 24 years

Code	Classification
00–01	Actual number of persons
02	2 or more persons

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 3; date of birth.

Note: This includes all persons who were members of the household at the time of the interview.

Number of children under 15 years

Code	Classification
00–01	Actual number of persons
02	2 or more persons

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 3; date of birth.

Note: This includes all persons who were members of the household at the time of the interview.

Number of economic families in household

Code	Classification
1	One economic family
2	2 or more economic families

Source
Questionnaire (FE2)
Section A. Household Composition,
Question 6.

Note: An economic family is a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, adoption or common-law. A one-person household is one economic family. Households with unrelated members would fall under two or more economic families.

Income group code

Code	Classification
01	Less than $10,000
02	$10,000–$14,999

03	$15,000–$19,999
04	$20,000–$29,999
05	$30,000–$39,999
06	$40,000–$49,999
07	$50,000–$59,999
08	$60,000–$69,999
09	$70,000–$79,999
10	$80,000–$99,999
11	$100,000 or more
99	Not stated

Source
Questionnaire (FE2)
Section B. Spending habits,
Question 5.

Note: Income includes income from all sources before deductions for all household members during the preceding 12 months. For 2001, respondents were asked to indicate into which of 12 income groups their household income fell. In previous food expenditure surveys, there were detailed income questions for each household member 15 years of age and over. This allowed data to be tabulated by custom income group and income quintile. In order to reduce respondent burden, these detailed questions were removed.

Since the survey was conducted in monthly samples throughout 2001, income refers to varying periods ranging from approximately the calendar year 2000 for the January 2001 sample, to the calendar year 2001 for the December 2001 sample.

2.3.5 Expenditures

Number of meals received free or reimbursed while on trips overnight or longer

This includes the weekly number of meals received free, reimbursed, or part of a package trip.

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 5.

Note: Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Total weekly food expenditure

Total of:

Total food purchased from stores
Total food purchased from restaurants

Source

Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Questions 4 and 5.

Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Total food purchased from stores

Total of:

Total food purchased from stores locally and on day trips
Total food purchased from stores on trips overnight or longer

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Questions 4 and 5.

Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Total food purchased from stores locally and on day trips

This includes expenditures on:

Meat
Fish and other marine products
Dairy products and eggs
Bakery and other cereal products
Fruits and nuts
Vegetables
Condiments, spices and vinegar
Sugar and sugar preparations
Coffee and tea

Fats and oils
Other foods, food materials and preparations
Non-alcoholic beverages

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Meat purchased from stores locally and on day trips

This includes expenditures on:

Fresh or frozen meat
Fresh or frozen poultry meat
Other meat and meat preparations

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Fish and other marine products purchased from stores locally and on day trips

This includes expenditures on:

Fish
Other marine products

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Dairy products and eggs purchased from stores locally and on day trips

This includes expenditures on:

Dairy products
Eggs

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,

Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Bakery and other cereal products purchased from stores locally and on day trips

This includes expenditures on:

Bakery products
Pasta products
Cereal grains and other cereal products

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Fruits and nuts purchased from stores locally and on day trips

This includes expenditures on:

Fruits
Nuts

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Vegetables purchased from stores locally and on day trips

This includes expenditures on:

Fresh vegetables
Other vegetables and vegetable preparations

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Condiments, spices and vinegar purchased from stores locally and on day trips

This includes expenditures on:

Pickles
Ketchup
Other sauces and sauce mixes
Mayonnaise and salad dressings
Other condiments
Spices

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Sugar and sugar preparations purchased from stores locally and on day trips

This includes expenditures on:

Sugar and syrup
Sugar preparations

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Coffee and tea purchased from stores locally and on day trips

This includes expenditures on:

Coffee
Tea

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Fats and oils purchased from stores locally and on day trips

This includes expenditures on:

Margarine
Shortening
Lard
Cooking and salad oil

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Other foods, food materials and preparations purchased from stores locally and on day trips

This includes expenditures on:

Soup
Infant or junior food
Pre-cooked frozen food preparations
Materials for food preparations
Other food preparations

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Non-alcoholic beverages purchased from stores locally and on day trips

This includes expenditures on:

Carbonated beverages
Fruit drinks
Other non-alcoholic beverages

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Food purchased from stores while on trips overnight or longer

Source
Questionnaire (FE2)

Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 5.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.
The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Food purchased from restaurants locally and on day trips

This includes expenditures on food purchased:

Locally or on day trips

Source
Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Food purchased from restaurants while on trips overnight or longer

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.
The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Food purchased from specialty stores locally and on day trips

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: *Food Specialty Store:* offers a wide variety of a limited number of items. Include butcher shops, fresh produce stores, bakeries, fish markets, delicatessens, health food stores, markets or stands, and direct purchases from producers and frozen food suppliers.

All expenditures are weekly purchases. Number of implied decimals: 2.

Food purchased from convenience stores locally and on day trips

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: *Convenience Store:* offers a limited variety of a general line of groceries (food and non-food items).

All expenditures are weekly purchases. Number of implied decimals: 2.

Food purchased from supermarkets locally and on day trips

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: *Supermarket:* offers a wide variety of most grocery items (food and non-food). Retail co-operatives are included in this group.

All expenditures are weekly purchases. Number of implied decimals: 2.

Food purchased from other stores locally and on day trips

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: *Other:* any other type of store that sells food items, such as department stores, club type stores, drug stores, etc.

All expenditures are weekly purchases. Number of implied decimals: 2.

Food purchased from table service restaurants

This includes expenditures on:

Breakfasts
Lunches
Dinners
Between-meals food, snacks and non-alcoholic beverages

Source
Questionnaire (FE2)

Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Table Service Restaurants*: Restaurants, bars or pubs that serve food and beverages at a table or an eating counter.

This category should be indicated even if purchases are to be taken out or delivered.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Breakfasts purchased from table service restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Table Service Restaurants*: Restaurants, bars or pubs that serve food and beverages at a table or an eating counter.
This category should be indicated even if purchases are to be taken out or delivered.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Lunches purchased from table service restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Table Service Restaurants*: Restaurants, bars or pubs that serve food and beverages at a table or an eating counter.

This category should be indicated even if purchases are to be taken out or delivered.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Dinners purchased from table service restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Table Service Restaurants*: Restaurants, bars or pubs that serve food and beverages at a table or an eating counter.

This category should be indicated even if purchases are to be taken out or delivered.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Between-meals food purchased from table service restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Table Service Restaurants*: Restaurants, bars or pubs that serve food and beverages at a table or an eating counter.

This category should be indicated even if purchases are to be taken out or delivered.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Food purchased from fast food restaurants

This includes expenditures on:

Breakfasts
Lunches
Dinners
Between-meals food, snacks and non-alcoholic beverages

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Fast Food Restaurants*: have no table service. Instead the customers order the food at a counter and choose to "eat-in" or "take-out".

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Breakfasts purchased from fast food restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Fast Food Restaurants:* have no table service. Instead the customers order the food at a counter and choose to "eat-in" or "take-out".

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Lunches purchased from fast food restaurants

Source

Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Fast Food Restaurants:* have no table service. Instead the customers order the food at a counter and choose to "eat-in" or "take-out".

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Dinners purchased from fast food restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Fast Food Restaurants:* have no table service. Instead the customers order the food at a counter and choose to "eat-in" or "take-out".

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Between-meals food purchased from fast food restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Fast Food Restaurants:* have no table service. Instead the customers order the food at a counter and choose to "eat-in" or "take-out".

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Food purchased from cafeterias

This includes expenditures on:

Breakfasts
Lunches
Dinners
Between-meals food, snacks and non-alcoholic beverages

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Cafeterias*: are usually associated with businesses or institutions (e.g., offices, hospitals). These are self-serve eating places where a tray is provided to carry food items to a cashier.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Breakfasts purchased from cafeterias

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Cafeterias*: are usually associated with businesses or institutions (e.g., offices, hospitals). These are self-serve eating places where a tray is provided to carry food items to a cashier.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Lunches purchased from cafeterias

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Cafeterias*: are usually associated with businesses or institutions (e.g., offices, hospitals). These are self-serve eating places where a tray is provided to carry food items to a cashier.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Dinners purchased from cafeterias

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Cafeterias*: are usually associated with businesses or institutions (e.g., offices, hospitals). These are self-serve eating places where a tray is provided to carry food items to a cashier.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Between-meals food purchased from cafeterias

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,

Pages 6-19.

Note: *Cafeterias*: are usually associated with businesses or institutions (e.g., offices, hospitals). These are self-serve eating places where a tray is provided to carry food items to a cashier.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Food purchased from other restaurants

This includes expenditures on:

Breakfasts
Lunches
Dinners
Between-meals food, snacks and non-alcoholic beverages

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Others*: includes refreshment stands, snack bars, vending machines, chip wagons and caterers. They are usually found at supermarkets, theatres, exhibitions, sports events, parks, etc.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Breakfasts purchased from other restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Others*: includes refreshment stands, snack bars, vending machines, chip wagons and caterers. They are usually found at supermarkets, theatres, exhibitions, sports events, parks, etc.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Lunches purchased from other restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Others*: includes refreshment stands, snack bars, vending machines, chip wagons and caterers. They are usually found at supermarkets, theatres, exhibitions, sports events, parks, etc.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Dinners purchased from other restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Others*: includes refreshment stands, snack bars, vending machines, chip wagons and caterers. They are usually found at supermarkets, theatres, exhibitions, sports events, parks, etc.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Between-meals food purchased from other restaurants

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,

Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: *Others*: includes refreshment stands, snack bars, vending machines, chip wagons and caterers. They are usually found at supermarkets, theatres, exhibitions, sports events, parks, etc.

All expenditures are weekly purchases. Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Total food purchased from restaurants

Total of:

Food purchased from table service restaurants
Food purchased from fast food restaurants
Food purchased from cafeterias
Food purchased from other restaurants

OR

Food purchased from restaurants locally and on day trips
Food purchased from restaurants while on trips over night or longer

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.
The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

2.3.6 Number of meals purchased from restaurants

Number of breakfasts purchased locally and on day trips

This represents the weekly number.

Source
Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: Number of implied decimals: 2.

Number of lunches purchased locally and on day trips

This represents the weekly number.

Source
Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: Number of implied decimals: 2.

Number of dinners purchased locally and on day trips

This represents the weekly number.

Source
Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: Number of implied decimals: 2.

Number of breakfasts purchased while on trips overnight or longer

This represents the weekly number.

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Note: Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Number of lunches purchased while on trips overnight or longer

This represents the weekly number.

Source

Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Note: Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Number of dinners purchased while on trips overnight or longer

This represents the weekly number.

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Note: Number of implied decimals: 2. The conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

Total number of meals purchased from restaurants

This includes the weekly number of meals purchased:

Locally or on day trips
While on trips overnight or longer

Source
Questionnaire (FE2)
Section C. Food and beverages while away from home overnight or longer during the previous month,
Question 4.

Diary (FE3)
Food and beverages purchased from restaurants locally and on day trips,
Pages 6-19.

Note: Number of implied decimals: 2. the conversion factor has been applied. The conversion factor allows monthly responses from the questionnaire to be converted to weekly responses. The conversion factor is the number of months in a year divided by 52 weeks (12 divided by 52 = .2308) resulting in the average number of weeks per month.

2.3.7 Daily expenditure on food and beverages purchased from stores

First day of diary

Code	Classification
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday
7	Sunday

Source
Diary (FE3)
Cover.

Note: Indicates the day of the week on which the diary was started.

First day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-7.

Note: Number of implied decimals: 2.

Second day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 8-9.

Note: Number of implied decimals: 2.

Third day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 10-11.

Note: Number of implied decimals: 2.

Fourth day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 12-13.

Note: Number of implied decimals: 2.

Fifth day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 14-15.

Note: Number of implied decimals: 2.

Sixth day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 16-17.

Note: Number of implied decimals: 2.

Seventh day's expenditure

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 18-19.

Note: Number of implied decimals: 2.

2.3.8 Additional variable

Household record flag

Code	Classification
0	Not the first household record
1	First household record

Note: The household record flag indicates the first reported weekly diary. This field could be used to create a household level file.

3. DETAILED FOOD CATEGORY FILE

3.1 Technical Characteristics

CONTENT: Family Food Expenditures—2001

SOURCE: Food Expenditure Survey in 2001
Income Statistics Division
Statistics Canada

DATA SET NAME: PUMD_FOOD2001_DETAIL_FILEV1.TXT

NUMBER OF RECORDS: 456,219

FORMAT: Fixed length
Record Size = 33 bytes

SEQUENCE CONTROL
FIELD TITLE: "Identification Number"

3.2 Record Layout of the Detailed Food Category File

Field	Size	Implied Decimal	Position	Type[1]	Description	Variable Name
1	5	0	1-5	n	Identification number	CASEID
2	1	0	6	n	Diary week	WEEK
3	4	0	7-10	c	Food item code	FMFCODE
4	1	0	11	c	Type of store purchase made	TYPEOFSTORE
5	9	4	12-19	n	Quantity purchased	QUANTITY
6	9	4	20-28	n	Expenditure	EXPENDITURE
7	5	5	29-33	n	Weight	WEIGHT
[1]	n = numeric					
	c = character					

3.3 Variable Descriptions for the Detailed Food Category File

Identification number

Each household has a unique five-digit number. The numbers begin at 00001 and end at 05643. The identification number enables the user to identify all records containing purchases by a household. Duplicate record numbers will be on the file for all households with two completed diaries. The identification number together with the week links the summary household file to the detailed food category file.

Week

Code	Classification
1	Diary completed during first week after interview
2	Diary completed during second week after interview

Food item code

Each food item has a unique code. For a complete list of the food items and their respective codes, see Appendix C. For detailed food code descriptions, see Appendix E.

Type of store

Code	Classification
1	Food specialty store
2	Convenience store
3	Supermarket
4	Other

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Food Specialty Store: offers a wide variety of a limited number of items. Include butcher shops, fresh produce stores, bakeries, fish markets, delicatessens, health food stores, markets or stands, and direct purchases from producers and frozen food suppliers.

Convenience Store: offers a limited variety of a general line of groceries (food and non-food items).

Supermarket: offers a wide variety of most grocery items (food and non-food). Retail co-operatives are included in this group.

Other: any other type of store that sells food items, such as department stores, club type stores, drug stores, etc.

Quantity

Quantity is a measurement of the weekly net weight or volume and may be in litres, kilograms or number of units.

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: Number of implied decimals: 3.

Expenditure

Expenditure is the total amount spent on this item in the given week at the type of store. The amount is measured in cents (i.e. 2 implied decimals).

Source
Diary (FE3)
Food and beverages purchased from stores locally and on day trips,
Pages 6-19.

Note: All expenditures are weekly purchases. Number of implied decimals: 2.

Household weight

In order to provide estimates applicable to the Canadian population in the 10 provinces, it is necessary to weight each record. This weight reflects the variation in sampling and response rates among geographic areas and household types. This weight is the same as the household weight on the summary household file.

4. NOTES AND DEFINITIONS

4.1 Methodology

4.1.1 The Survey Universe

The 2001 Food Expenditure Survey was carried out in private households in urban and rural areas in Canada's 10 provinces as well as in the cities of Whitehorse, Yellowknife and Iqaluit. The survey covers about 98% of the population in the 10 provinces.

The following groups were excluded from the survey:
- those living on Indian reserves and crown lands;
- official representatives of foreign countries living in Canada and their families;
- members of religious and other communal colonies;
- members of the Canadian Armed Forces living in Military Camps;
- people living in residences for senior citizens;
- people living full time in institutions: for example, inmates of penal institutions and chronic care patients living in hospitals and nursing homes.

Information was not gathered from persons temporarily living away from their families (for example, students at university), because it would be gathered from their families if selected. In this way, double counting of such individuals was avoided.

Furthermore, for operational reasons, households residing in dwellings located in remote areas were excluded from the 2001 Food Expenditure Survey. These households represent less than 1% of the population described above but are difficult and expensive to contact.

4.1.2 Survey Content and Reference Period

The Food Expenditure Survey is a periodic survey carried out every 4 or 5 years. It is designed to supplement the Survey of Household Spending (SHS)[1] by providing a level of expenditure detail on food commodities not feasible in the context of the SHS methodology. Data from the 2001 Food Expenditure Survey and the Survey of Household Spending are used to update the weights used in the calculation of the Consumer Price Index.

4.1.3 The Sample

The sample size for the 2001 Food Expenditure Survey was 9,488 dwellings.

This sample was a stratified, multi-stage sample selected from the Labour Force Survey (LFS) sampling frame. Sample selection comprised two main steps: the selection of clusters (small geographic areas) from the LFS frame and the selection of dwellings within these selected clusters. The LFS sampling frame mainly uses 1991 Census geography and 1991 population counts.[2]

The sample was drawn for the whole year and then divided into monthly subsamples to evenly distribute data collection over the entire 2001 calendar year. This ensures that we get an accurate picture of food expenditures regardless of the season.

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[1] *The SHS is an annual survey that asks respondents to recall all expenditures made during the most recent calendar year. The results of the SHS are published in* Spending Patterns in Canada, *Catalogue no. 62-202.*

[2] *A detailed description of the Labour Force Survey sampling frame can be found in* Methodology of the Canadian Labour Force Survey, *Statistics Canada; Catalogue no. 71-526-XPB.*

4.1.4 Data Collection

The Food Expenditure Survey was conducted monthly during the 2001 calendar year. Data were collected by an interviewer by means of a personal interview using a paper questionnaire (FE2). Two weekly diaries (FE3) were also left for the respondent to complete daily for two consecutive weeks.

The questionnaire was used primarily to collect selected socio-economic characteristics (including income), as well as information on the household's purchasing habits and food expenditures if away from home during the previous month. Following the interview, respondents were asked to maintain a daily record of all food expenditures (excluding those while on a trip overnight or longer) using two one-week diaries. Respondents were asked to provide detailed descriptions of daily food purchases including type of packaging (frozen, canned, dried, other), number of units purchased, weight or volume per unit (in either metric or imperial measure), the total cost of the purchase and whether purchased from a food speciality store, convenience store, supermarket or other store. In 2001 respondents were asked to attach their grocery store receipts to the diaries so that the processing staff could identify certain food commodities or find unreported weights.

For meals and snacks in restaurants, the type of meal (breakfast, lunch, dinner, between-meals food) was requested. Respondents were also asked to record the number of meals and total cost, and to indicate whether the meal had been purchased from a table-service restaurant, fast-food restaurant, cafeteria or other restaurant.

At the end of each one-week recording period, interviewers were required to return to the respondent's home to pick up and review the previous week's diary for completeness and accuracy. At the same time, information was collected on items which might have influenced the previous week's purchasing pattern and level of expenditure such as household member absences during the week, number of meals served to guests or other non-household members, free meals received, food received as gifts or home-produced, and food from hunting or fishing.

4.1.5 Processing

Processing consisted of:

1. Reviewing the questionnaires for missing information, for clarity and for errors.
2. Coding food commodities on the diaries according to approximately 210 different food codes. Coders also entered missing weights or volumes based on the price declared and the quantity of the product purchased..
3. Checking basic ranges for data fields during data entry.
4. Passing data through an editing system that included checking for missing data and verifying consistency between selected data fields.
5. Reviewing and correcting extreme data values.
6. Imputing missing values using the nearest neighbour method or averages (only for expenditures on meals). Detailed food codes were assigned from donor records having similar characteristics (province, quarter of the year, similar expenditures, etc).
7. Tabulating expenditures using a PC/client server-based system. This system provides tools (database querying, searching, and viewing capabilities) for spotting systematic errors.

4.1.6 Quality Control

To maximize accuracy during the processing of the survey data, strict procedures for quality control were followed. Editing was carried out in stages. Preliminary edits, mainly for completeness, were done by the interviewers in the field.

Adjustment for Bias in Purchases from Stores

As in previous surveys, average expenditures and quantities for food purchased from stores locally and on day trips have been adjusted to allow for shortfalls in data reported on the diaries. An adjustment factor of 1.0827 has been applied to each expenditure and quantity item. See the section "Data Quality" for an explanation of the adjustment.

Response Rate

The overall response rate was 71.3%. In Technical Table 1, the sample response by region is summarized.

Technical Table 1					
Response Rate by Region, 2001					
			Eligible Households		
	Total	**Non-contacts***	**Refusals**	**Usables****	**Response Rate**
Canada	**8,414**	**978**	**1,437**	**5,999**	**71.3%**
Atlantic Region	856	70	105	681	79.6%
Quebec	1,615	117	252	1,246	77.2%
Ontario	2,404	349	450	1,605	66.8%
Prairie Region	1,590	147	228	1,215	76.4%
British Columbia	1,422	218	308	896	63.0%
Whitehorse, Yellowknife and Iqaluit	527	77	94	356	67.6%
* Non-contacts includes codes for:					
Interview prevented by unusual circumstances (death, sickness, language, etc.)					
Interview prevented by weather conditions					
No-one home					
Household temporarily absent					
Interview cancelled for lack of an interviewer					
** Usables includes codes for:					
FE2 and 1 diary (partial)					
FE2 and 2 diaries (complete)					

4.1.7 Weighting

The estimation of population characteristics from a sample survey is based on the premise that each sampled unit represents a certain number of units in the population. A basic survey weight was attached to each record in the sample to reflect this representation.

These basic weights were adjusted for non-response by calendar quarter in each of 13 metropolitan areas, 18 additional geographic areas, and three high-income strata. The 18 additional geographical areas consist of regional groupings of the remaining metropolitan areas and urban and rural areas which are based on census definitions but do not necessarily correspond exactly. For definitions of *metropolitan area, urban* and *rural*, refer to the 1996 Census Dictionary, Catalogue no. 92-378-XPE.

To increase the reliability of the estimates, weights were also adjusted to ensure that estimates based on relevant characteristics of the population would respect population totals from sources other than the survey. These totals are based on demographic projections as of January 19, 2002 using the 1996 Census of Population (adjusted for net undercoverage).

Controls for six age groups combined with totals for one-person households, two-person households and more than two-person households are used at the regional level. There are also totals for the number of single-parent families and couples with never-married children that are also used at the regional level.

Controls for two age groups are used in 13 metropolitan areas plus Whitehorse. In addition to these two age groups, in Whitehorse the following controls are also used: counts of one-person households, two-person households and households with more than two persons. For Yellowknife and Iqaluit, only the total number of households is used. Note that records for Whitehorse, Yellowknife, and Iqaluit are not included in this public-use file.

All weekly records from a household received the same weight. Most households (95%) have two records—one for each weekly diary completed. However, 252 households completed only one diary and therefore have only one record.

4.2 Data Quality

4.2.1 Sampling Error

Sampling errors occur because inferences about the entire population are based on information obtained from only a sample of the population. The sample design, the variability of the data, and the sample size determine the size of the sampling error. In addition, for a given sample design, different methods of estimation will result in different sampling errors.

The design for the 2001 Food Expenditure Survey was a stratified multi-stage sampling scheme. The sampling errors for multi-stage sampling are usually higher than for a simple random sample of the same size. However, the operational advantages outweigh this disadvantage and the fact that the sample is also stratified improves the precision of estimates.

Data variability is the difference between members of the population with respect to spending on a specific item. In general, the greater these differences are, the larger the sampling error will be. In addition, the larger the sample size, the smaller the sampling error.

Standard Error and Coefficient of Variation

A common measure of sampling error is the standard error (SE). Standard error is the degree of variation in the estimates as a result of selecting one particular sample rather than another of the same size and design. It has been shown that the "true" value of the characteristic of interest lies within a range of +/- 1 standard error of the estimate for 68% of all samples, and +/- 2 standard errors for 95% of all samples.

The coefficient of variation (CV) is the standard error expressed as a percentage of the estimate. It is used to indicate the degree of uncertainty associated with an estimate. For example, if the estimate of an average expenditure for a given category is $75, and the corresponding CV is 5%, then the "true" value is between $71.25 and $78.75, 68% of the time and between $67.50 and $82.50, 95% of the time.

Standard errors for the 2001 Food Expenditure Survey were estimated using the jackknife technique, which leads to a slight over-estimation and is, thus, conservative. For more information, refer to the Statistics Canada publication (Catalogue no. 71-526), *Methodology of the Canadian Labour Force Survey*.

Coefficients of variation for summary expenditure estimates for Canada and the regions are presented in the publication, Food Expenditure in Canada, 2001 (62-554-XIE) which is included with this file.

Data Suppression

For reliability reasons, estimates with CVs greater than 33% should be suppressed. To facilitate tabulation, data suppression for the Food Expenditure Survey is based on a relationship between the CV and the number of weekly records with a non-zero amount for an expenditure category. Analysis of past survey results indicates that CVs usually reach this level when the number of weekly records with a non-zero amount for an item drops to about 40. Therefore, average weekly expenditure and percentage reporting have been suppressed for spending on items reported in fewer than 40 weekly records.

However, data for suppressed items do contribute to summary level variables presented in the publication. For example, the expenditure for a particular category of meat might be suppressed but this amount forms part of the total expenditure estimate for meat.

4.2.2 Non-sampling Error

Non-sampling errors occur because certain factors make it difficult to obtain accurate responses or responses that retain their accuracy throughout processing. Unlike sampling error, non-sampling error is not readily quantified. Four sources of non-sampling error can be identified: coverage error, response error, non-response error, and processing error.

Coverage Error

Coverage error results from inadequate representation of the intended population. This error may occur during sample design or selection, or during data collection and processing.

Response Error

Response error may be due to many factors, including design of the questionnaire, interviewers' or respondents' misinterpretation of questions, or inaccurate reporting. The diary method requires respondents to record their expenditures as they are made. Errors may arise, however, as respondents make transcription errors, use misleading terms for products, or guess, in the absence of price and quantity labels.

Several features of the survey aim to help respondents provide data as accurately as possible. Personal visits from the interviewer provide assistance on how to fill in the diaries. Sometimes the interviewer helps the respondent to fill in gaps in the data. In addition, for 2001, respondents were strongly encouraged to attach their store receipts to the diary page corresponding to the day of the purchase. The receipts provided additional information for processing staff. Also new for 2001 was the notebook. Every member of the household aged eight years and over was given a small notebook to carry all day to facilitate the notation of products at the time of purchase.

Non-response Error

Non-response error occurs in sample surveys because not all potential respondents cooperate fully. The extent of non-response varies from partial non-response to total non-response. The importance of the non-response error is unknown but in general this error is significant when a group of people with particular characteristics in common refuses to cooperate and where those characteristics are important determinants of survey results.

Total non-response occurs when the interviewer is unable to contact the respondent, no member of the household is able to provide information, or the respondent refuses to participate in the survey. Total non-response is handled by adjusting the basic survey weight for responding households to compensate for non-responding households. For the 2001 Food Expenditure Survey, the overall response rate is 71.3%. See Technical Table 1 for regional response rates.

In a survey conducted using a questionnaire, partial non-response occurs when the respondent does not understand or misinterprets a question, refuses to answer a question, or is unable to recall the requested information. When a diary is used, partial non-response occurs when the respondent does not enter complete information for each purchase. The Food Expenditure Survey uses both a questionnaire and a diary to collect data. Imputing missing values from the questionnaire compensates for partial non-response.

In some cases the respondent may only partially cooperate in completing the survey. Some of the non-response error associated with partial cooperation is measurable by examining the difference between first week and second week diaries. For two-week reporters, average expenditure on food purchased from stores in the second week is 10% lower than in the first week.

Adjustment Factor Applied to Values Obtained from Diary

During the questionnaire interview, respondents were asked to provide household expenditures on food purchased from stores during a four-week period. The estimate for expenditure on food purchased from stores that was obtained via the questionnaire was $83.68 compared to an estimate of $77.27 using only data from the diaries—a difference of 8.3%. On the assumption that the questionnaire estimate of food purchased from stores is more reliable than the corresponding diary estimate, values for food from stores purchased locally and on day trips from each household have been increased in proportion to the ratio of the two numbers ($83.68/$77.27 = 1.083).

While separate adjustment factors could have been applied to all subgroups of the population, in view of the underlying sampling and non-sampling errors, a single adjustment factor has been applied. No information is available to differentially adjust the commodity groups or to indicate adjustments to the percentage reporting.

Adjustment factors of 1.158, 1.163, 1.137 and 1.152 were applied respectively to the 1996, 1992, 1990 and 1986 Food Expenditure Survey estimates. Since the estimates from surveys prior to 1986 were not adjusted to compensate for under-reporting of food purchased from stores, the following adjustment factors should be applied before making comparisons with 1986, 1990, 1992, 1996 or 2001 estimates:

1982 = 1.090
1984 = 1.117

Note that the above adjustment factors apply at the national level. Since some of the previous food expenditure surveys were conducted for selected cities only, the following adjustment factors should be used for city level comparisons: for 1982, 1986, 1992, 1996 and 2001 the factors are 1.125, 1.173, 1.175, 1.193 and 1.096 respectively.

No adjustments have been applied to the estimates of food expenditures in restaurants.

Processing Error

Processing errors may occur in any of the data processing stages, for example, during data entry, editing, weighting, and tabulation. See *Data Processing and Quality Control* for a description of the steps taken to reduce processing error.

4.2.3 Comparability over Time

Estimates from the 2001 Food Expenditure Survey have been produced using a different methodology from previous surveys.

The new methodology includes the use of control totals based on the 1996 Census of Population to replace those based on the 1991 Census. To facilitate comparisons, the 1996 food expenditure data have been reweighted using the new methodology. Contact Client Services at 1-888-287-7355 for more information or to obtain 1996 data tables with reweighted data.

4.2.4 Definitions

Average weekly expenditure per household: This refers to the weighted sum of the weekly record values for each variable, divided by the weighted number of weekly records. These averages are based on **all** households in a class, **including** households that did not have expenditures in a given category.

Percentage reporting: This refers to the weighted number of weekly records with a non-zero amount for an expenditure category expressed as a percentage of the weighted number of weekly records.

Total weekly expenditure for all households: This refers to the estimated average weekly expenditure per household multiplied by the estimated number of households. This can be multiplied by 52 weeks (or, more accurately, 365 divided by 7) to give the annual total expenditure.

4.3 Guidelines for Data Tabulation, Analysis and Dissemination

This section describes the guidelines that users should follow when totalling, analysing, publishing or releasing data from the public-use microdata files.

4.3.1 Summary Household File and Detailed Food Category File

The summary household data file is a household-week file. Specifically, a household that reports two weeks of data will be represented by two records: one for the expenditures reported in the first week and another for the expenditures reported in the second week.

The file contains 5,643 respondent households, of which 5,391 reported two weeks of data and 252 reported only one week of data. Hence, the summary household file contains 11,034 records: 5,391 households are represented by two records each, 252 households are represented by one record each.

The summary household file contains data on household characteristics and some food expenditure data.

If we want to produce estimates relating to household characteristics, we have to make sure not to double-count the characteristics of households represented by two records. The variable FLD79_V010 in the summary household file can be used for that purpose; when computing estimates relating to household characteristics, use only those records in which FLD79_V010 equals 1.

The detailed food category file contains 456,219 records. For 247 food variables, it contains the amount spent and the quantity purchased for each household, week and type of store.

We can expect to have to manipulate both the summary and detailed files when we assess the quality of the estimates. It is necessary to link both files in order to obtain estimates of food items found only on the detailed food category file. The link between the two files is the household identification number and the week specified. After linkage, each household should be represented by only one record that contains the information required to produce the desired estimates and measurements of their quality.

4.3.2 Guidelines for Rounding

To ensure that estimates from these microdata files intended for publication or any other type of release correspond to estimates that would be obtained by Statistics Canada, we strongly recommend that users comply with the following guidelines for rounding estimates.

(a) Estimates in the body of a statistical table must be rounded using the traditional rounding technique. For example, if we use that technique to round to the nearest hundredth, if the first or only number to be eliminated is between 0 and 4, the preceding number does not change. If the first or only number to be eliminated is between 5 and 9, the value of the last number to be retained increases by 1. For example, when using the traditional technique of rounding to the nearest hundredth, if the last two numbers are between 00 and 49, they are replaced by 00 and the preceding number (denoting hundredths) stays as is. If the last two numbers are between 50 and 99, they are replaced with 00 and the preceding number increased by 1.

(b) Total partial sub-totals and total sub-totals in statistical tables must be calculated using their unrounded corresponding components, then rounded in turn to the closest hundredth using the traditional rounding technique.

(c) Means, ratios, rates and percentages must be calculated using unrounded components (i.e. numerators and/or denominators), and then rounded using the traditional rounding technique. For example, we round the average weekly expenditure per household to two decimals, the percentage reporting to one decimal, and the average quantity per household to three decimals.

(d) Totals and differences (or ratios) must be calculated using their corresponding unrounded components, then rounded to the nearest unit (or decimal place) using the traditional rounding technique.

(e) If, due to technical or other limitations, a technique other than traditional rounding is used, with the result that the estimates to be published or released differ in any form from the corresponding estimates that would be obtained by Statistics Canada using this microdata file, we strongly advise users to indicate the reasons for the differences in the documents to be published or released.

(f) Unrounded estimates cannot under any circumstances be published or released in any way whatsoever by users. Unrounded estimates give the impression that they are much more precise than they actually are.

4.3.3 Guidelines for the Weighting of the Sample for Totalling Purposes

The sample design used for FOODEX is not self-weighted, meaning that the households in the sample do not all have the same sampling weight. To produce simple estimates, including standard statistical tables, users must use the appropriate sampling weight (FLD04_Weight). Otherwise, the estimates calculated using the microdata files cannot be considered representative of the observed population and will not correspond to those that would be obtained by Statistics Canada using these microdata files. See also the section entitled Weighting.

Users should also note that depending on the method they use to process the weight field, some software packages may not produce estimates that correspond exactly to those of Statistics Canada using these microdata files.

4.3.4 Types of Estimates: Categorical Versus Quantitative

Before discussing how FOODEX data can be totalled and analysed, it is useful to describe the two main types of estimations that may be produced from the microdata files for the Food Expenditure Survey.

Categorical estimates

Categorical estimates are estimates of the number or percentage of households in the survey's target population that have certain characteristics or belong to a defined category. The number of households reporting a particular level of income is an example of this type of estimate.

Example of a categorical question:

Looking at the scale, what is your best estimate of the total income from all sources, before deductions of all household members during the past 12 months?

_ Less than $5,000
_ $5,000 - $9,999
_ $10,000 - $14,999

_ $15,000 - $19,999
_ $20,000 - $29,999
_ $30,000 - $39,999
_ $40,000 - $59,999
_ $60,000 - $69,999
_ $70,000 - $79,999
_ $80,000 - $99,999
_ $100,000 or more
_ Don't know
_ Refused

Totalling of Categorical Estimates

Estimates of the number of households with a given characteristic can be obtained, after the microdata files have been manipulated so that they contain only one record per household, by adding the weights of all records containing the desired characteristic or characteristics. Percentages and ratios in the X/Y form are obtained as follows:

(a) by adding the final weights of records containing the desired characteristic for the numerator X;
(b) by adding the final weights of records containing the desired characteristic for the denominator Y;
(c) by dividing the estimate for the numerator by the estimate for the denominator.

Quantitative Estimates

Quantitative estimates are estimates of totals or means, medians or other central tendency measurements of quantities based on all members of the observed population or based on some of them. They explicitly include estimates of means which take the form X/Y where X is an estimate of the total quantity for the observed population and Y is an estimate of the number of units in the observed population that contribute to that total quantity.

An example of a quantitative estimate is average weekly meat expenditure per household in the target population. Since FOODEX collects data for two weeks, the following is recommended: the numerator corresponds to a total based on all weeks where an expenditure on meat was reported (total expenditure for nearly two weeks), and the denominator corresponds to an estimate of the number of weeks reported by households, (nearly double the estimate of the number of households). Some households reported only one week of data, which explains why the total expenditure does not quite represent expenditure for two weeks, and the number of weeks reported is not exactly double the number of households.

4.3.5 Guidelines for Statistical Analysis

The Food Expenditure Survey is based on a complex survey design that includes stratification and multiple stages of selection, as well as uneven respondent selection probabilities. The use of data from such complex surveys poses problems for analysts, because the survey design and the selection probabilities influence the estimation and variance calculation methods to be used.

Although numerous analytical methods in statistical software packages allow for the use of weights, the meaning or definition of weights differs from that suitable for a sample survey. As a result, although the estimates done using those packages are in many cases accurate, the **variances calculated have almost no significance**.

For numerous analytical techniques (for example, linear regression, logistic regression, variance analysis), there is a way to make the application of standard packages more significant. If the weights of the records contained in the file are converted so that the mean weight is (1), the results produced by standard packages will be more reasonable and will take into account uneven selection probabilities, although they still cannot take into account the stratification and the cluster distribution of the sample. The conversion can be done using in the analysis a weight equal to the original weight divided by the mean of original weights for sampling units (households) that contribute to the estimator in question. However, because this method still does not take into account sample design stratification and clusters, **the estimates of the variance calculated in this way will very likely be underestimates of true values**.

4.3.6 Guidelines for Release

Before releasing and/or publishing estimates taken from the microdata file, users must first determine the level of reliability of the estimates. The quality of the data is affected by the sampling error and the non-sampling error as described above. However, the level of reliability of estimates is determined solely on the basis of sampling error, as evaluated using the coefficient of variation (CV) as shown in the table below. In addition to calculating CVs, users should also read the section of this document regarding the characteristics of data quality.

To get some idea of an estimate's reliability, consider how many weeks the estimate was based on. If it was based on fewer than 40 weeks, it's probably not very reliable and **should not be released**. For weighted estimates based on 40 weeks or more, users should determine the CV of the rounded estimate following the guidelines below.

Table 1: Sampling Variability Guidelines

Type of Estimate	CV (in %)	Guidelines
1. Acceptable	0.0- 6.5	Estimates can be considered for general unrestricted release. Requires no special notation.
2. Marginal	16.6-33.3	Estimates can be considered for general unrestricted release but should be accompanied by a warning cautioning subsequent users of the high sampling variability associated with the estimates. Such estimates should be identified by the letter M (or in some other similar fashion).
3. Unacceptable	Greater than 33.3	Statistics Canada does not recommend the release of estimates of unacceptable quality. However, if the user chooses to do so then estimates should be flagged with the letter U (or in some other similar fashion) and the following warning should accompany the estimates: "The user is advised that . . . (specify the data) . . . do not meet Statistics Canada's quality standards for this statistical program. Conclusions based on these data will be unreliable and most likely invalid."

Computation of Approximate CVs

To provide a means of assessing the quality of estimates, Statistics Canada produces tables of coefficients of variation (CVs) for many FOODEX variables for Canada and by region. CVs are produced for the following estimates: average expenditure and weekly quantity per household and percentage reporting. These CVs are found in the publication Food Expenditure in Canada (Catalogue no. 62-554-XIE) included with these microdata files.

The CV of an estimate is defined to be the square root of the variance of the estimate divided by the estimate itself and expressed as a percentage. The numerator of the CV is a measure of the sampling error of the estimate, called the standard error, and is calculated at Statistics Canada with the Jackknife method. This method requires, among other things, information about the strata and the clusters, which can't be given on the public use microdata file for reasons of confidentiality. So that users may estimate CVs for variables not included in the CV tables, Statistics Canada has produced a set of rules to obtain approximate CVs for a wide variety of estimates. It should be noted that these rules provide approximate and, therefore, unofficial CVs. The quality of the approximation, however, is quite satisfactory, especially for the most reliable estimates. Note that accuracy of this approximation is reduced when the domains become

smaller. Therefore, the CV approximation method must be used prudently when the domains are small.

How to Obtain Approximate CVs

The following rules should enable the user to determine the approximate coefficients of variation for estimates of totals, means or proportions, ratios and differences between such estimates for sub-populations (domains) for which the Jackknife CV is not provided in the CV tables.

Important: To use the rules given below, the microdata files must first be linked and manipulated so as to obtain a file in which each household is represented by just one record.

An estimate for total expenditure represents total expenditure for a period of almost two weeks. This estimate is needed to estimate the average weekly expenditure per household and its approximate coefficient of variation. An example will be provided following the four rules below. This estimate of total expenditure should not be confused with total weekly expenditure for all households as defined in the Definitions section above.

It is a good idea to check how many weeks an estimate is based on. If an estimate is based on less than 40 weekly records, it should not be released.

Rule 1: Approximating CVs for estimates of totals (aggregates)

All the steps below must be followed to obtain an approximate CV (ACV) for an estimate of a total (either a number of households possessing a certain characteristic (categorical estimate) or a total of some expense for all households (quantitative estimate)) for a sub-population (domain) of interest:

(1) Create a binary variable for each household, say I, equalling 1 if the household is part of the domain of interest, i.e. possesses the desired characteristic and 0 otherwise;
(2) To estimate a quantitative variable, create a variable Y representing the product of the binary variable I and the variable of interest. To estimate a categorical variable, create a variable Z equal to 1 if the categorical variable is equal to the value of interest, and equal to 0 otherwise. Define variable Y as the product of I and Z;
(3) Do step (4) to step (9) for each region separately;
(4) Calculate the sum over all the households of the product of the final weight (Weighting section), and Y (this sum represents the estimate of the total for the domain of interest in the region under consideration);
(5) Calculate the sum over all the households of the product of the final weight and the household size;
(6) Divide the result obtained in step (4) by the result obtained in step (5);
(7) For each household, multiply the result obtained in step (6) by the household size;
(8) For each household, define a variable, say E, by the subtraction of the result obtained in step (7) from Y;
(9) Calculate the sum over all the households of the product of the final weight minus 1, the final weight and E squared (this sum represents the estimated variance of the total estimated at step 4);
(10) Add up the result obtained in step (9) for each region;
(11) The ACV is defined to be 100 times the square root of the result obtained in step (10), divided by the estimate. The estimate is the sum over all the regions of the result obtained in step (4).

More formally, steps 1 to 10 above can be obtained with the following formula:

$$\sum_{p=1}^{5} \sum_{k \in S_p} (w_k - 1) w_k \left(Y_k - m_k \sum_{k \in S_p} w_k Y_k \Big/ \sum_{k \in S_p} w_k m_k \right)^2$$

where the index *p* corresponds to regions, S_p is the sample of respondents for the region *p*, the index *k* corresponds to households, w_k is the final weight for the k^{th} household, m_k is the household size for the k^{th} household and Y_k is the value of the variable Y, defined in step (2) above, for the k^{th} household**.**

Step 11 represents the following calculation:

$$CVA_{CANADA} = 100 * \frac{\sqrt{Variance_{CANADA}}}{Estimation_{CANADA}}$$

$$= 100 * \frac{\sqrt{Variance_{ATLT} + ... + Variance_{B-C}}}{Estimation_{ATLT} + ... + Estimation_{B-C}}$$

Important: When estimating variance for a given domain, do not limit yourself to units belonging to the domain. The entire sample should always be used to estimate variance. Units that do not belong to the domain of interest are not considered when computing the point estimate of the total, but do contribute when estimating the variance**.**

Rule 2: Approximating CVs for estimates of averages or proportions

An average or proportion is the relationship between two estimated totals. For a proportion, the numerator is the estimate of a subset of the denominator—for example, the proportion of weeks reporting a particular expenditure to total weeks reported. The CV of the estimate of an average or a proportion tends to be slightly lower than the CV of the numerator. As a result, the CV of the estimate of an average or a proportion can be approximated by the CV of the numerator, and the technique described in Rule 1 can be used.

Rule 3: Approximating CVs for estimates of ratios

Ratio refers to the relationship between two estimates to which Rule 2 does not apply. Therefore, calculations of approximate CVs for any other type of ratio may be approximated using the following formula:

$$\mathrm{ACV_R} = \sqrt{\mathrm{ACV_N^2} + \mathrm{ACV_D^2}}$$

where ACV_R is the approximate CV of the ratio, ACV_N is the approximate CV of the numerator of the ratio and ACV_D is the approximate CV of the denominator of the ratio. The formula will tend to overestimate the CV if the two estimates forming the ratio are positively correlated and underestimate the CV if these two estimates are negatively correlated.

Rule 4: Approximating CVs for estimates of differences

The approximate CV of a difference between any two estimates ($EST_{DIFF} = EST_1 - EST_2$) is given by:

$$ACV_{DIFF} = \frac{\sqrt{(EST_1 ACV_1)^2 + (EST_2 ACV_2)^2}}{| EST_{DIFF} |}$$

where ACV_1 is the approximate CV associated with EST_1 and ACV_2 is the approximate CV associated with EST_2. The formula will tend to overestimate the CV if the two estimates forming the difference are positively correlated and underestimate the CV if these two estimates are negatively correlated.

Examples

First, the detailed calculations of two estimates and their approximate CVs will be presented using an example based on just a few records and variables from the summary and detailed data files. One estimate will be the average weekly expenditure on meat per household, and the other will be the percentage reporting (number of weekly records where an expenditure on meat is reported expressed as a percentage of the total number of weekly records). Note that the percentage reporting does not represent the percentage of *households* reporting but rather the percentage of *weekly records* reporting. Since the procedure for calculating an approximate CV is applied independently within each region, we will describe the procedure for just one region: the Atlantic Region. Second, actual cases of estimating averages and ratios, based on all the data from the microdata files, will be presented so that users can check their results and ensure that the method they used was valid.

Part 1: Example using a few records from the microdata files

In the case of the summary household file, we take only five variables from the records with identifiers 3, 6, 23, 37, 78 and 82. That gives us the following 11 records:

Table 2: Example from the summary household file

Initial Data				
FLD01_ CaseId	FLD05_ DV_Region	FLD02_ DiaryWeek	FLD04_ Weight	FLD13_ DV_SizeOfHhld
3	1	1	362	1
3	1	2	362	1
6	1	1	788	3
6	1	2	788	3
23	1	1	1176	3
23	1	2	1176	3
37	1	1	957	3
37	1	2	957	3
78	1	1	1184	2
82	1	1	962	1
82	1	2	962	1

In the case of the detailed food category file, we take only five variables from the records with identifiers 3, 6, 23, 37, 78 and 82 and meat expenditures (F001). That gives us the following eight records:

Table 3: Example from the detailed food category file

Initial Data				
CaseId	Week	FMFCode	Typeof Store	Expenditure
3	2	F001	1	43.38
6	1	F001	1	10.43
23	1	F001	1	13.73
23	2	F001	4	6.45
37	1	F001	2	0.67
37	1	F001	3	9.30
37	2	F001	3	9.69
82	2	F001	1	6.09

Note that there is no record with identifier 78. That indicates the household had no meat expenditure.

(A) Manipulating the files

In this example, we are interested in total meat expenditure (F001), i.e. for all weeks reported and all types of stores.

One of the first steps in manipulating the files is to add up the meat expenditures of all households in the detailed food category file. In addition, if we are interested in the percentage reporting (number of weekly records where an expenditure on meat is reported expressed as a percentage of the total number of weekly records**)**, we have to create a variable indicating the number of weeks in which there was a meat expenditure. We obtain the following file:

Table 4: **Step 1: Manipulating the detailed food category file**

CaseId	FMFCode	Expenditure Sum F001 per household	Number of weeks per household with expenditure F001
3	F001	43.38	1
6	F001	10.43	1
23	F001	20.18	2
37	F001	19.66	2
82	F001	6.09	1

The next step is to manipulate the summary household file so that each household is represented by one record. It's a good idea to eliminate the variable FLD02_DiaryWeek since it's irrelevant when the file is at the household level. In addition, we have to create a new variable indicating the number of weeks reported in order to estimate the total number of weeks reported. The result is the following file:

Table 5: **Step 2: Manipulating the summary household file**

FLD01_ CaseId	FLD05_ DV_Region	FLD04_ Weight	FLD13_ DV_SizeOfHhld	Number of weeks reported per household
3	1	362	1	2
6	1	788	3	2
23	1	1176	3	2
37	1	957	3	2
78	1	1184	2	1
82	1	962	1	2

The final step is to link the manipulated summary and detailed data files by identifier, leaving each household represented by a single record. The result is the final file:

Table 6: Final file

FLD01_ CaseId (=CaseId)	FLD05_ DV_Region	FLD04_ Weight	FLD13_ DV_SizeOfHhld	Number of weeks reported per household	Expenditure Sum F001 per household	Number of weeks per household with an expenditure F001
3	1	362	1	2	43.38	1
6	1	788	3	2	10.43	1
23	1	1176	3	2	20.18	2
37	1	957	3	2	19.66	2
78	1	1184	2	1	0.00	0
82	1	962	1	2	6.09	1

(B) Estimates and approximate CVs of food expenditures

Say we want to estimate the average weekly expenditure by households of two or more people on meat (quantitative variable). We have to calculate the total meat expenditure divided by the total number of weeks reported.

It is a good idea to check the number of weeks contributing to the meat expenditure estimate. We obtain that number by adding up column "**Number of weeks per household with an expenditure F001**" after excluding the households with identifiers 3 and 82, which are one-person households. The number of weeks is 1 + 2 + 2 = 5. According to the guidelines for release, when this number is less than 40, the quality of the estimation is probably not reliable and it ought not to be released. Since this is just an example that uses only a few records, we will continue.

The two tables below contain detailed calculations of the estimates of total meat expenditure and the total number of weeks reported and the associated approximate CVs computed using Rule 1.

Table 7: Detailed calculation of the estimate and approximate CV of total meat expenditure by households with 2 or more persons (Steps 1 to 9)

Step 3 is not necessary since this example has only one region.

	Step 1	Step 2	Step 4	Step 5	Step 6
Ident.	Binary variable "I"	Quantitative variable "Y"	Weighted Y	Variable "K"	
		(X * I)	(weight * Y)	(weight * size)	
3	0	43.38 * 0 = 0.00	362 * 0.00 = 0.00	362 * 1 = 362	
6	1	10.43 * 1 = 10.43	788 * 10.43 = 8218.84	788 * 3 = 2364	
23	1	20.18 * 1 = 20.18	1176 * 20.18 = 23731.68	1176 * 3 = 3528	50765.14 divided by 12455 = 4.08
37	1	19.66 * 1 = 19.66	957 * 19.66 = 18814.62	957 * 3 = 2871	
78	1	0.00 * 1 = 0.00	1184 * 0.00 = 0.00	1184 * 2 = 2368	
82	0	6.09 * 0 = 0.00	962 * 0.00 = 0.00	962 * 1 = 962	
			Total = 50765.14	Total = 12455	

Step 7	Step 8	Step 9
Step 6 * size	Y - Step 7	(Weight - 1) * Weight * (Step 8)^2
4.08 * 1 = 4.08	0.00 - 4.08 = -4.08	361 * 362 * (-4.08)^2 = 2170998.31
4.08 * 3 = 12.23	10.43 - 12.23 = -1.80	787 * 788 * (-1.80)^2 = 2004069.37
4.08 * 3 = 12.23	20.18 - 12.23 = 7.95	1175 * 1176 * (7.95)^2 = 87384783.83
4.08 * 3 = 12.23	19.66 - 12.23 = 7.43	956 * 957 * (7.43)^2 = 50538432.51
4.08 * 2 = 8.15	0.00 - 8.15 = -8.15	1183 * 1184 * (-8.15)^2 = 93076522.95
4.08 * 1 = 4.08	0.00 - 4.08 = -4.08	961 * 962 * (-4.08)^2 = 15358265.55
		Total = 250533072.52

The estimated total expenditure is the total in the Step 4 column: $50765.14.

Since the example has only the Atlantic (ATLT) region, the approximate CV is calculated as the following:

$$ACV_{ATLT} = 100 * \frac{\sqrt{Variance_{ATLT}}}{Estimate_{ATLT}} = 100 * \frac{\sqrt{Step\ 9_{ATLT}}}{Step\ 4_{ATLT}} = 100 * \frac{\sqrt{250533072.52}}{50765.14} = 31.18$$

Table 8: Detailed calculation of the estimate and the approximate CV of the total number of weeks reported by households with 2 or more persons (Steps 1 to 9)

	Step 1	Step 2	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Ident.	Binary variable "I"	Quantitative variable "Y"	Weighted Y	Variable "K"		Step 6 * size	Y - Step 7	(Weight - 1) * Weight * (Step 8)^2
		(X * I)	(weight * Y)	(weight * size)				
3	0	2 * 0 = 0	362 * 0 = 0	362 * 1 = 362		0.56 * 1 = 0.56	0 - 0.56 = -0.56	361 * 362 * (-0.56)^2 = 41585.76
6	1	2 * 1 = 2	788 * 2 = 1576	788 * 3 = 2364		0.56 * 3 = 1.69	2 - 1.69 = 0.31	787 * 788 * (0.31)^2 = 58703.57
23	1	2 * 1 = 2	1176 * 2 = 2352	1176 * 3 = 3528	7026 divided by 12455 = 0.56	0.56 * 3 = 1.69	2 - 1.69 = 0.31	1175 * 1176 * (0.31)^2 = 130800.30
37	1	2 * 1 = 2	957 * 2 = 1914	957 * 3 = 2871		0.56 * 3 = 1.69	2 - 1.69 = 0.31	956 * 957 * (0.31)^2 = 86603.09
78	1	1 * 1 = 1	1184 * 1 = 1184	1184 * 2 = 2368		0.56 * 2 = 1.13	1 - 1.13 = -0.13	1183 * 1184 * (-0.13)^2 = 23028.14
82	0	2 * 0 = 0	962 * 0 = 0	962 * 1 = 962		0.56 * 1 = 0.56	0 - 0.56 = -0.56	961 * 962 * (-0.56)^2 = 294189.58
			Total = 7026	Total = 12455				Total = 634910.42

The estimate of the total number of weeks reported is 7026.

$$ACV_{ATLT} = 100 * \frac{\sqrt{634910.42}}{7026} = 11.34$$

On the basis of the foregoing calculations, we can now compute the average weekly meat expenditure for households with two or more members. The estimate is

$$\frac{Total\_meat\_expenditure}{Total\_number\_of\_weeks\_reported} = \frac{50765.14}{7026} = \$7.23$$

The ACV of this estimate is obtained using Rule 2. It's equal to the ACV of the numerator: 31.18.

Clearly, the ACV of the total number of weeks reported is not needed to calculate the ACV of the average weekly expenditure per household, but it is relevant to the estimate of the total number of weeks reported.

(C) Estimates and approximate CVs of percentage reporting

Suppose we want to estimate, for households with two or more members, the percentage reporting an expenditure on meat. We have to divide the total number of weeks where an expenditure on meat is reported by the total number of weeks reported.

We have already calculated the estimate and ACV of the total number of weeks reported: 7026 and 11.34 respectively.

Table 9: Detailed calculation of the estimate and the approximate CV of the total number of weeks where an expenditure on meat is reported (Steps 1 to 9)

	Step 1	Step 2	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Ident.	Binary variable "I"	Quantitative variable "Y"	Weighted Y	Variable "K"		Step 6 * size	Y - Step 7	(Weight - 1) * Weight * (Step 8)^2
		(X * I)	(weight * Y)	(weight * size)				
3	0	1 * 0 = 0	362 * 0 = 0	362 * 1 = 362		0.41 * 1 = 0.41	0 - 0.41 = -0.41	361 * 362 * (-0.41)^2 = 21517.85
6	1	1 * 1 = 1	788 * 1 = 788	788 * 3 = 2364		0.41 * 3 = 1.22	1 - 1.22 = -0.22	787 * 788 * (-0.22)^2 = 29294.76
23	1	2 * 1 = 2	1176 * 2 = 2352	1176 * 3 = 3528	5054	0.41 * 3 = 1.22	2 - 1.22 = 0.78	1175 * 1176 * (0.78)^2 = 846425.55
37	1	2 * 1 = 2	957 * 2 = 1914	957 * 3 = 2871	divided by 12455	0.41 * 3 = 1.22	2 - 1.22 = 0.78	956 * 957 * (0.78)^2 = 560419.72
78	1	0 * 1 = 0	1184 * 0 = 0	1184 * 2 = 2368	=	0.41 * 2 = 0.82	0 - 0.82 = -0.82	1183 * 1184 * (-0.82)^2 = 922527.77
82	0	1 * 0 = 0	962 * 0 = 0	962 * 1 = 962	0.41	0.41 * 1 = 0.41	0 - 0.41 = -0.41	961 * 962 * (-0.41)^2 = 152223.42
			Total = 5054	Total = 12455				Total = 2532409.07

The estimate of the total number of weeks reported for meat is 5054.

$$ACV_{ATLT} = 100 * \frac{\sqrt{2532409.07}}{5054} = 31.49$$

On the basis of the foregoing calculations, we can now compute, for households with two or more members, the percentage reporting an expenditure on meat. The estimate is

$$\frac{Total\_nb\_of\_weeks\_where\_an\_expenditure\_on\_meat\_is\_reported}{Total\_number\_of\_weeks\_reported} = \frac{5054}{7026} = 0.719$$

Expressed as a percentage, this becomes 71.9%. The ACV of this estimate is obtained using Rule 2. It's equal to the ACV of the numerator: 31.49.

(D) Qualitative variable (categorical)

To estimate a categorical variable, the steps will be the same as those shown earlier for quantitative variables. Instead of a quantitative value for variable of interest X, we would create a dichotomous variable that would be equal to 1 if the household has the features we want to estimate. If not, it would be equal to 0.

To estimate categorical variables, various approaches may be used for defining the domain and the variable of interest, any of which will produce the same results.

Suppose we want to estimate the number of households with two or more members and an income of $80,000 or more. We could proceed in different ways:

(1) Binary variable I is equal to 1 for all households and variable X is equal to 1 for households with two or more members and an income of $80,000 or more**.**
(2) Binary variable I is equal to 1 for all households with two or more members and variable X is equal to 1 for all households with an income of $80,000 or more.
(3) Binary variable I is equal to 1 for all households with an income of $80,000 or more and variable X is equal to 1 for all households with two or more members.
(4) Binary variable I is equal to 1 for all households with two or more members and an income of $80,000 or more, and X is equal to 1 for all households.

Whatever approach is used, the resulting Y variable (step 2) will be equal to 1 if the household possesses all the necessary features (two or more members and an income of $80,000 or more). If not, it will be equal to 0. Results in terms of point estimates and estimates of variance (or ACV) will thus be the same.

Part 2: Actual cases based on the microdata file

(A) Estimates and approximate CVs of food expenditures

Suppose we want to estimate the average weekly meat expenditure for households in urban areas in the Atlantic Region. We have to divide the total meat expenditure by the total number of weeks reported.

First, we have to manipulate the microdata files to obtain a file similar to the one described in the previous example. Then we carry out Steps 1 to 11 in Rule 1 to obtain estimates of total meat expenditure and total number of weeks reported. For the latter, only Steps 1 to 4 are required, since we only need to estimate the total number of weeks reported. We will go through up to Step 11 to show the calculations of this estimate's ACV.

Table 10 shows the results of selected steps in calculating the estimates and their ACVs.

Table 10: Calculation of estimates and approximate CVs

Step	Total meat expenditure	Total number of weeks reported
4	19614875.79	1148353
5	2309072	2309072
6	8.49	0.50
9	$1.9482*10^{12}$	2517244903
10	$1.9482*10^{12}$	2517244903
11	7.12	4.37

On the basis of the foregoing calculations, we can now compute the average weekly meat expenditure for households in urban areas in the Atlantic Region. The estimate is

$$\frac{Total\_meat\_expenditure}{Total\_number\_of\_weeks\_reported} = \frac{19614875.79}{1148353} = \$17.08$$

The ACV of this estimate is obtained using Rule 2. It's equal to the ACV of the numerator: 7.12.

(B) Estimates and approximate CVs of a ratio

Suppose we want to estimate the ratio of the average weekly meat expenditure per household in urban areas to the average weekly meat expenditure per household in rural areas, for the Atlantic Region.

First, we have to calculate the total meat expenditure divided by the total number of weeks reported for households in urban areas in the Atlantic Region. We did those calculations in the previous example and obtained an estimate of $17.08 and an ACV of 7.12.

Second, we have to calculate the total meat expenditure divided by the total number of weeks reported for households in rural areas in the Atlantic Region**.**

Table 11 shows the results of selected steps in calculating the estimates and their ACVs.

Table 11: Calculation of estimates and approximate CVs

Step	Total meat expenditure	Total number of weeks reported
4	10735282.85	620968
5	2309072	2309072
6	4.65	0.27
9	$8.51798*10^{11}$	1323321612
10	$8.51798*10^{11}$	1323321612
11	8.60	5.86

On the basis of the foregoing calculations, we can now compute the average weekly meat expenditure for households in rural areas in the Atlantic Region. The estimate is

$$\frac{Total\_meat\_expenditure}{Total\_number\_of\_weeks\_reported} = \frac{10735282.85}{620968} = \$17.29$$

The ACV of this estimate is obtained using Rule 2. It's equal to the ACV of the numerator: 8.60.

Therefore, the desired ratio is $17.08 / $17.29 = 0.99. The ACV of this ratio is obtained using Rule 3.

$$CVA_{ATLT\_RATIO} = \sqrt{(7.12)^2 + (8.60)^2} = 11.16$$

How to obtain confidence limits

Although coefficients of variation are widely used, a more intuitively meaningful measure of sampling error is the confidence interval of an estimate. A confidence interval constitutes a statement on the level of confidence that the true value for the population lies within a specified range of values. For example a 95% confidence interval can be described as follows.

If sampling of a population is repeated many times, each sample leading to a new confidence interval for an estimate, then in 95% of the samples the interval will cover the true population value.

Using the CV of an estimate, its confidence intervals may be obtained assuming that, under repeated sampling of the population, the various estimates obtained for a characteristic are normally distributed around the true population value. Using this assumption, the chances are about 68 out of 100 that the difference between a sample estimate and the true population value would be less than one standard error, about 95 out of 100 that the difference would be less than two standard errors, and about 99 out 100 that the differences would be less than three standard errors. These different degrees of confidence are referred to as the confidence levels.

Confidence intervals for an estimate, EST, are generally expressed as two numbers, one below the estimate and one above the estimate, as (EST - k, EST + k) where k is determined depending on the level of confidence desired and the sampling error of the estimate.

Confidence intervals for an estimate can be calculated by first determining the ACV of the estimate and then using the following formula to convert to a confidence interval CI:

$$(\mathrm{EST} - \mathrm{z} \times \mathrm{EST} \times \mathrm{ACV} / 100, \mathrm{EST} + \mathrm{z} \times \mathrm{EST} \times \mathrm{ACV} / 100)$$

where

z = 1 if a 68% confidence interval is desired,
z = 1.6 if a 90% confidence interval is desired,
z = 2 if a 95% confidence interval is desired,
z = 3 if a 99% confidence interval is desired.

Note: Release guidelines, which apply to the estimate, also apply to the confidence interval. For example, if the estimate is not releasable, then the confidence interval is not releasable either.

Example

A 95% confidence interval for the average weekly meat expenditure per household in rural areas in the Atlantic Region can be calculated as follows:

EST = $17.29
z = 2
ACV = 8.60

CI = (17.29 – 2 x 17.29 x 8.60/100 ; 17.29 + 2 x 17.29 x 8.60/100) = ($14.32; $20.26)

How to do a Z-test

Coefficients of variation may also be used to perform hypothesis testing, a procedure for distinguishing between population parameters using sample estimates. The sample estimates can be totals, averages, ratios, etc. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the characteristics are different when, in fact, they are identical.

Let EST_1 and EST_2 be sample estimates for 2 characteristics of interest. Let the approximate CV of the difference $EST_1 – EST_2$ be ACV_{DIFF}.

If z = 100 / ACV_{DIFF} is less than 2, then no conclusion about the difference between the characteristics is justified at the 5% level of significance. If however, this ratio is larger than 2, the observed difference is significant at the 5% level.

Example

Suppose we want to test, at the 5% confidence level, the hypothesis that there is no difference in average weekly meat expenditure per household between rural and urban areas in the Atlantic Region.

The above examples have shown that in the Atlantic Region, the average weekly meat expenditure per household is $17.29 in rural areas and $17.08 in urban areas, and their respective ACVs are 8.60 and 7.12.

The estimate of the difference is $17.29 – $17.08 = 0.21. By Rule 4, its ACV is

$$CVA_{ATLT\_DIFF} = \frac{\sqrt{(17.29*8.60)^2 + (17.08*7.12)^2}}{|0.21|} = 914.72$$

Z = 100 / 914.72 = 0.11

Since this value is less than 2, we cannot conclude that there is a significant difference between the two estimates at the 0.05 confidence level.

5. Appendices – See Excel File

A. Summary Household File: Frequency Counts

B. Summary Household File: Averages and Totals

C. Detailed Food Category File

D. Variable Changes for 2001

E. Food Code Descriptions