Labour Force Quality Report

Canadian Labour Force Survey

March, 1974

Confidential Restricted Circulation

Household Surveys Development Staff
Labour Force Survey Division
Field Division

Statistics Canada Statistique Canada

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Comparisons of: a) Canadian and American Unemployment rates, and b) UIC Claimants and LFS Unemployed are presented in Appendix IV.

HIGHLIGHTS

A. SLIPPAGE

At the Canada level, the estimated slippage rate decreased from 5.0% in February to 4.5% in March.

1. - By province: Saskatchewan was the only province exhibiting a negative slippage rate (– 1.1%) in March. From February to March, increases in the estimated slippage rate were noted in Newfoundland and Alberta (a change of + 0.7 and + 0.2 respectively). The remaining eight provinces showed decreases in the estimated slippage rates. The decreases in estimated slippage within these eight provinces are mostly caused by increases in the average size of households. At the Canada level, it is seen that the increase in average size of household contributed almost entirely to the decrease in estimated slippage.

Province	Change in Average Size of Household (Feb/74 to Mar/74) (1)	Slippage Rates Mar. 1974 (2)	Slippage Rates Feb. 1974 (3)	Estimated Slippage Rate for March if the Average Size of Household was the same as for February (4)
Canada	+ 0.0096	4.5	5.0	4.9
Newfoundland	+ 0.0005	10.5	9.8	10.5
P.E.I.	+ 0.0429	9.0	9.2	10.5
N.S.	+ 0.0219	9.9	10.3	10.7
N.B.	+ 0.0019	6.7	6.8	6.8
Quebec	+ 0.0188	1.9	2.6	2.6
Ont.	+ 0.0008	5.0	5.1	5.1
Man.	+ 0.0189	1.7	3.1	2.5
Sask.	+ 0.0015	– 1.1	0.9	– 1.0
Alta.	+ 0.0001	7.4	7.2	7.4
B.C.	+ 0.0221	7.0	7.9	7.9

By comparing the figures in columns (2) and (4), the estimated slippage rates would have been higher in March than those listed in column (2) for eight of the ten provinces if there were no changes in the average size of households.

2. - By Age at the Canada Level: All age groups at the Canada level exhibited positive slippage rates in March. From February to March, increases in the estimated slippage rate were noted in the 20-24 and 25-44 age groups. The remaining three age groups exhibited decreases in the estimated slippage rates.

B. NON-RESPONSE

The overall non-response rate at the Canada level increased from 6.0% in February to 6.4% in March. All the non-response components showed increases in their rates.

Compared with the overall non-response rate of March 1973 (6.8%), this year's March rate was lower. The decrease in the overall non-response rate from March 1973 to March 1974 was due to decreases in the N_1 and N_2 components.

For more detailed information on non-response rates, see Appendix III.

C. VARIANCE

The coefficient of variation of the estimate of Employed at the Canada level decreased from 0.38% in February to 0.37% in March. For the estimated total of Unemployed at the Canada level the coefficient of variation increased from 2.39% in February to 2.46% in March. This change is accounted for by the decrease in the estimated level of Unemployed from 635,000 to 599,000 over the two months.

At the provincial level the coefficients of variation of the estimate of Employed increased in the provinces of Manitoba, Saskatchewan and Alberta. In five provinces the coefficients of variation of Unemployed were higher than 10%; the provinces were Prince Edward Island, New Brunswick, Manitoba, Saskatchewan and Alberta. In addition to these provinces the coefficients of variation of Unemployed increased in Newfoundland, Quebec and British Columbia. In most cases these increases can be explained by decreases in the levels of Unemployed.

For more detailed information, see Appendix II.

D. REJECTED DOCUMENTS

The March reject rate at the Canada level for Labour Force items was 6.9%, an increase of 0.5% from the February rate of 6.4%.

At the regional level, three regions registered decreases ranging from 0.1% to 0.3% between the February and March results. Five regions had increases in their reject rate, ranging from 0.5% to 1.6%. It is to be noted that the three regions having the highest reject rates had numerous missing entries or inconsistent entries in:

- Identification items 1 to 4 (PSU, Segment, Listing and Line Numbers)
- Questions following a "W" or "L" activity entry in item 11 or 12.

A summary of careless errors in the categories of Invalid Interviewer Status (Item 26) and errors in identification was enclosed with the Analysis of Rejects for all regions. (This summary table appears on page 21 of this report.)

E. ENUMERATION COSTS

At the Canada level the March enumeration costs for the Labour Force Survey were calculated at $2.38 per sample household, unchanged from February 1974.

The Ottawa regional costs, at $2.57 per household, were unchanged from February 1974. The regions of Edmonton, Vancouver and Halifax registered increases of 5, 7 and 8 cents, respectively. Three regions had decreases ranging from 2 to 4 cents while the Montreal regional costs were calculated at $2.43 per sample household, down 10 cents from the $2.53 registered for February 1974.

Non-Response Rates, Rejected Document Rates and Enumeration Cost per Household by Regional Office

October 1972 to March 1973 and October 1973 to March 1974

	1974			1973			1973			1972		
	March	Feb.	Jan.	Dec.	Nov.	Oct.	March	Feb.	Jan.	Dec.	Nov.	Oct.
Non-response												
Canada ... %	6.4	6.0	6.0	6.6	5.2	5.7	6.8	7.2	7.3	6.3	5.2	5.1
St. John's ... %	1.9	2.0	2.6	4.1	2.7	3.3	3.2	3.5	3.1	2.7	3.9	3.4
Halifax ... %	6.8	5.9	7.2	7.6	5.5	5.5	6.3	7.0	6.4	7.1	5.7	5.5
Montreal ... %	7.1	7.7	6.4	7.6	6.3	6.4	6.8	7.2	8.2	6.5	5.6	5.3
Ottawa ... %	7.3	6.7	6.3	8.7	5.8	6.2	5.2	6.6	8.2	5.6	3.8	3.3
Toronto ... %	7.4	6.0	5.6	6.4	4.5	4.9	7.0	6.6	6.3	6.5	4.3	4.4
Winnipeg ... %	2.2	3.0	2.6	2.1	1.8	1.6	2.8	2.9	2.4	1.6	2.1	2.7
Edmonton ... %	6.3	5.0	5.7	5.3	5.4	6.1	9.1	11.0	9.4	7.5	6.5	6.6
Vancouver ... %	8.0	8.4	8.6	9.0	7.9	10,2	10.5	10.2	11.9	9.2	7.5	7.6
Rejected Documents (Regular Labour Force Items)												
Canada ... %	6.9	6.4	7.1	8.2	7.1	7.8	7.4	6.4	7.3	6.0	8.1	9.9
St. John's ... %	2.4	2.5	5.2	6.4	6.0	7.3	4.1	5.2	5.3	4.7	7.5	1.0
Halifax ... %	6.4	6.6	8.5	8.1	7.4	7,1	8.1	6.4	7.2	6.5	7.9	6.7
Montreal ... %	7.4	5.8	6.1	7.1	5.7	6.4	5.9	5.3	6.4	5.3	7.3	9.1
Ottawa ... %	5.0	4.4	5.5	6.1	6.1	8.0	7.2	6.1	5.1	4.5	6.9	10.4
Toronto ... %	8.2	8.5	8.0	9.4	7.4	8.8	10.1	7.1	8.5	7.4	10.9	13.9
Winnipeg ... %	5.6	4.6	6.1	6.9	6.2	6.9	6.2	5.5	9.6	4.7	5.7	8.3
Edmonton ... %	7.4	7.4	7.0	8.7	7.7	8.3	6.0	7.4	6.7	5.8	7.5	10.3
Vancouver ... %	8.4	7.2	8.0	10.7	9.9	10.0	8.0	7.6	7.8	7.0	8.2	11.2
Enumeration Cost per Household												
Canada ... $	2.38	2.38	2.40	2.32	2.41	2.52	2.17	2.18	2.20	2.20	2.15	2.10
St. John's ... $	2.72	2.75	2.78	2.70	2.75	2.89	2.52	2.47	2.35	2.42	2.42	2.35
Halifax ... $	2.32	2.24	2,31	2.18	2.29	2.29	1.95	1.92	1.90	1.86	1.80	1.75
Montreal ... $	2.43	2.53	2.52	2.37	2.58	2.70	2.37	2.38	2.42	2.47	2.28	2.27
Ottawa ... $	2.57	2.57	2.66	2.44	2.53	2.66	2.36	2.40	2.20	2.35	2.38	2.26
Toronto ... $	2.35	2.39	2.42	2.43	2.47	2.67	2.27	2.31	2.48	2.43	2.40	2.29
Winnipeg ... $	2.41	2.43	2.42	2.40	2.39	2.48	2.24	2.21	2.22	2.21	2.24	2.16
Edmonton ... $	2.26	2.21	2.24	2.11	2.22	2.29	1.79	1.91	1.93	1.89	1.85	1.88
Vancouver ... $	2.26	2.19	2.19	2.16	2.19	2.37	2.00	1.99	1.98	1.96	1.99	1.97

	Month-to-month change								Year-to-year change			
	1974		Dec. 1973 to Jan. 1974	1973	1973		Dec. 1972 to Jan. 1973	1972	March 1973 to March 1974	Feb. 1973 to Feb. 1974	Jan. 1973 to Jan. 1974	Dec. 1972 to Dec. 1973
	Feb. to March	Jan. to Feb.		Nov. to Dec.	Feb. to March	Jan. to Feb.		Nov. to Dec.				
Non-response												
Canada ... %	+ 0.4	-	- 0.6	+ 1.4	- 0.4	- 0.1	+ 1.0	+ 1.1	- 0.4	- 1.2	- 1.3	+ 0.3
St. John's ... %	- 0.1	- 0.6	- 1.5	+ 1.4	- 0.3	+ 0.4	+ 0.4	- 1.2	- 1.3	- 1.5	- 0.5	+ 1.4
Halifax ... %	+ 0.9	- 1.3	- 0.4	+ 2.1	- 0.7	+ 0.6	- 0.7	+ 1.4	+ 0.5	- 1.1	+ 0.8	+ 0.5
Montreal ... %	- 0.6	+ 1.3	- 1.2	+ 1.3	- 0.4	- 1.0	+ 1.7	+ 0.9	+ 0.3	+ 0.5	- 1.8	+ 1.1
Ottawa ... %	+ 0.6	+ 0.4	- 2.4	+ 2.9	- 1.4	- 1.6	+ 2.6	+ 1.8	+ 2.1	+ 0.1	- 1.9	+ 3.1
Toronto ... %	+ 1.4	+ 0.4	- 0.8	+ 1.9	+ 0.4	+ 0.3	- 0.2	+ 2.2	+ 0.4	- 0.6	- 0.7	- 0.1
Winnipeg ... %	- 0.8	+ 0.4	+ 0.5	+ 0.3	- 0.1	+ 0.5	+ 0.8	- 0.5	- 0.6	+ 0.1	+ 0.2	+ 0.5
Edmonton ... %	+ 1.3	- 0.7	+ 0.4	- 0.1	- 1.9	+ 1.6	+ 1.9	+ 1.0	- 2.8	- 6.0	- 3.7	- 2.2
Vancouver ... %	- 0.4	- 0.2	- 0.4	+ 1.1	+ 0.3	- 1.7	+ 2.7	+ 1.7	- 2.5	- 1.8	- 3.3	- 0.2
Rejected Documents (Regular Labour Force Items)												
Canada ... %	+ 0.5	- 0.7	- 1.1	+ 1.1	+ 1.0	- 0.9	+ 1.3	- 2.1	- 0.5	-	- 0.2	+ 2.2
St. John's ... %	- 0.1	- 2.7	- 1.2	+ 0.4	- 1.1	- 0.1	+ 0.6	- 2.8	- 1.7	- 2.7	- 0.1	+ 1.7
Halifax ... %	- 0.2	- 1.9	+ 0.4	+ 0.7	+ 1.7	- 0.8	+ 0.7	- 1.4	- 1.7	+ 0.2	+ 1.3	+ 1.6
Montreal ... %	+ 1.6	- 0.3	- 1.0	+ 1.4	+ 0.6	- 1.1	+ 1.1	- 2.0	+ 1.5	+ 0.5	- 0.3	+ 1.8
Ottawa ... %	+ 0.6	- 1.1	- 0.6	-	+ 1.1	+ 1.0	+ 0.6	- 2.4	- 2.2	- 1.7	+ 0.4	+ 1.6
Toronto ... %	- 0.3	+ 0.5	- 1.4	+ 2.0	+ 3.0	- 1.4	+ 1.1	- 3.5	- 1.9	+ 1.4	- 0.5	+ 2.0
Winnipeg ... %	+ 1.0	- 1.5	- 0.8	+ 0.7	+ 0.7	- 4.1	+ 4.9	- 1.0	- 0.6	- 0.9	- 3.5	+ 2.2
Edmonton ... %	-	+ 0.4	- 1.7	+ 1.0	- 1.4	+ 0.7	+ 0.9	- 1.7	+ 1.4	-	+ 0.3	+ 2.9
Vancouver ... %	+ 1.2	- 0.8	- 2.7	+ 0.8	+ 0.4	- 0.2	+ 0.8	- 1.2	+ 0.4	- 0.4	+ 0.2	+ 3.7
Enumeration Cost per Household												
Canada ... $	-	- 0.02	+ 0.08	- 0.09	- 0.01	- 0.02	-	+ 0.05	+ 0.21	+ 0.20	+ 0.20	+ 0.12
St. John's ... $	- 0.03	- 0.03	+ 0.08	- 0.05	+ 0.05	+ 0.12	- 0.07	-	+ 0.20	+ 0.28	+ 0.43	+ 0.28
Halifax ... $	+ 0.08	- 0.07	+ 0.13	- 0.11	+ 0.03	+ 0.02	+ 0.04	+ 0.06	+ 0.37	+ 0.32	+ 0.41	+ 0.32
Montreal ... $	- 0.10	+ 0.01	+ 0.15	- 0.21	- 0.01	- 0.04	- 0.05	+ 0.19	+ 0.06	+ 0.15	+ 0.10	- 0.10
Ottawa ... $	-	- 0.09	+ 0.22	- 0.09	- 0.04	+ 0.20	- 0.15	- 0.03	+ 0.21	+ 0.17	+ 0.46	+ 0.09
Toronto ... $	- 0.04	- 0.03	- 0.01	- 0.04	- 0.04	- 0.17	+ 0.05	+ 0.03	+ 0.08	+ 0.08	- 0.06	-
Winnipeg ... $	- 0.02	+ 0.01	+ 0.02	+ 0.01	+ 0.03	- 0.01	+ 0.01	- 0.03	+ 0.17	+ 0.22	+ 0.20	+ 0.19
Edmonton ... $	+ 0.05	- 0.03	+ 0.13	- 0.11	- 0.12	- 0.02	+ 0.04	+ 0.04	+ 0.47	+ 0.30	+ 0.31	+ 0.22
Vancouver ... $	+ 0.07	-	+ 0.03	- 0.03	+ 0.01	+ 0.01	+ 0.02	- 0.03	+ 0.26	+ 0.20	+ 0.21	+ 0.20

NOTE: Slippage rates have been deleted temporarily from this table as historical rates are not yet available on the revised basis. However, a table is given on next page giving slippage rates for Feburary 1974 and March 1974 calculated on population projections based on 1971 Census.

Slippage Rates(1), Canada by Age and Provincial Totals

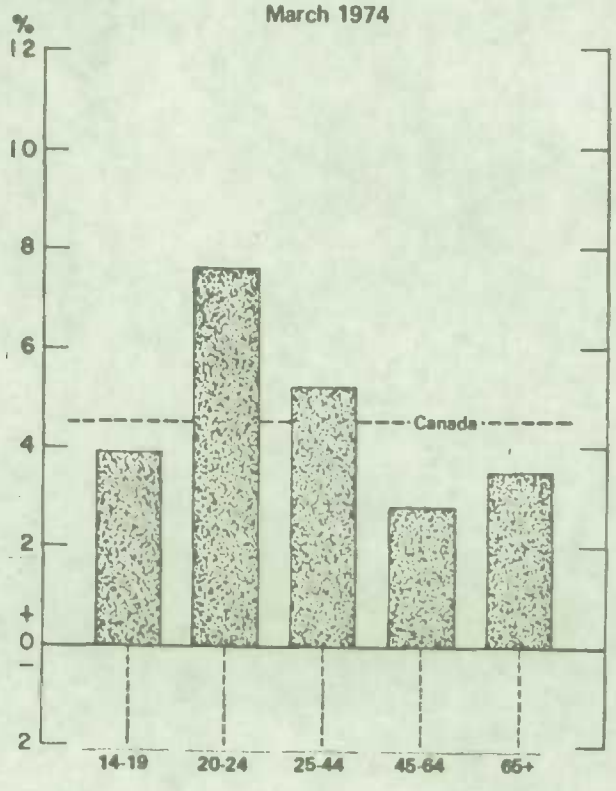
February and March 1974

	March 1974	Feb. 1974	Feb.-to-March Change
Canada	4.5	5.0	– 0.5
14-19 years	3.9	4.8	– 0.9
20-24 years	7.6	7.2	+ 0.4
25-44 years	5.2	4.7	+ 0.5
45-64 years	2.8	4.4	– 1.6
65 and over	3.5	5.0	– 1.5

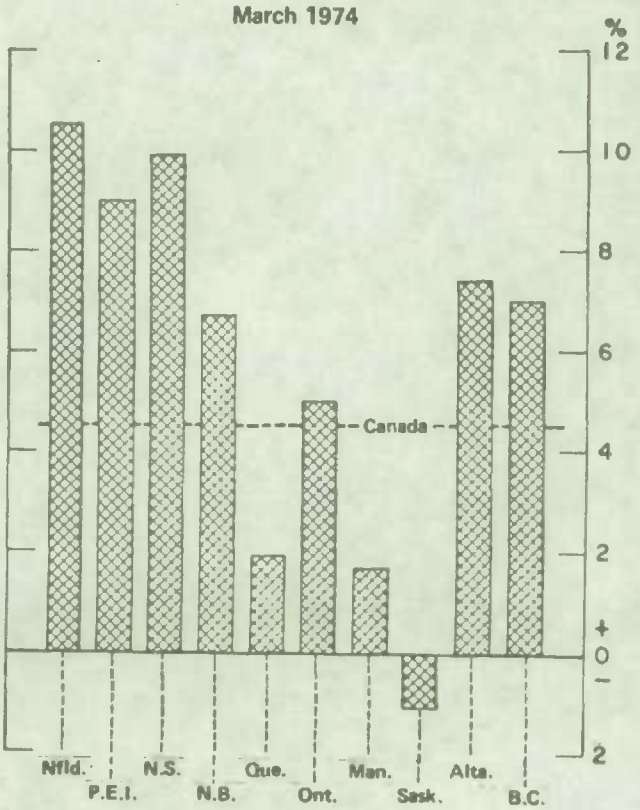
	March 1974	Feb. 1974	Feb.-to-March Change
Nfld.	10.5	9.8	+ 0.7
P.E.I.	9.0	9.2	– 0.2
N.S.	9.9	10.3	– 0.4
N.B.	6.7	6.8	– 0.1
Que.	1.9	2.6	– 0.7
Ont.	5.0	5.1	– 0.1
Man.	1.7	3.1	– 1.4
Sask.	– 1.1	0.9	– 2.0
Alta.	7.4	7.2	+ 0.2
B.C.	7.0	7.9	– 0.9

(1) The Above Rates are Calculated on Population Projections Based on 1971 Census.

Slippage Rates by Age Groups at Canada Level
March 1974



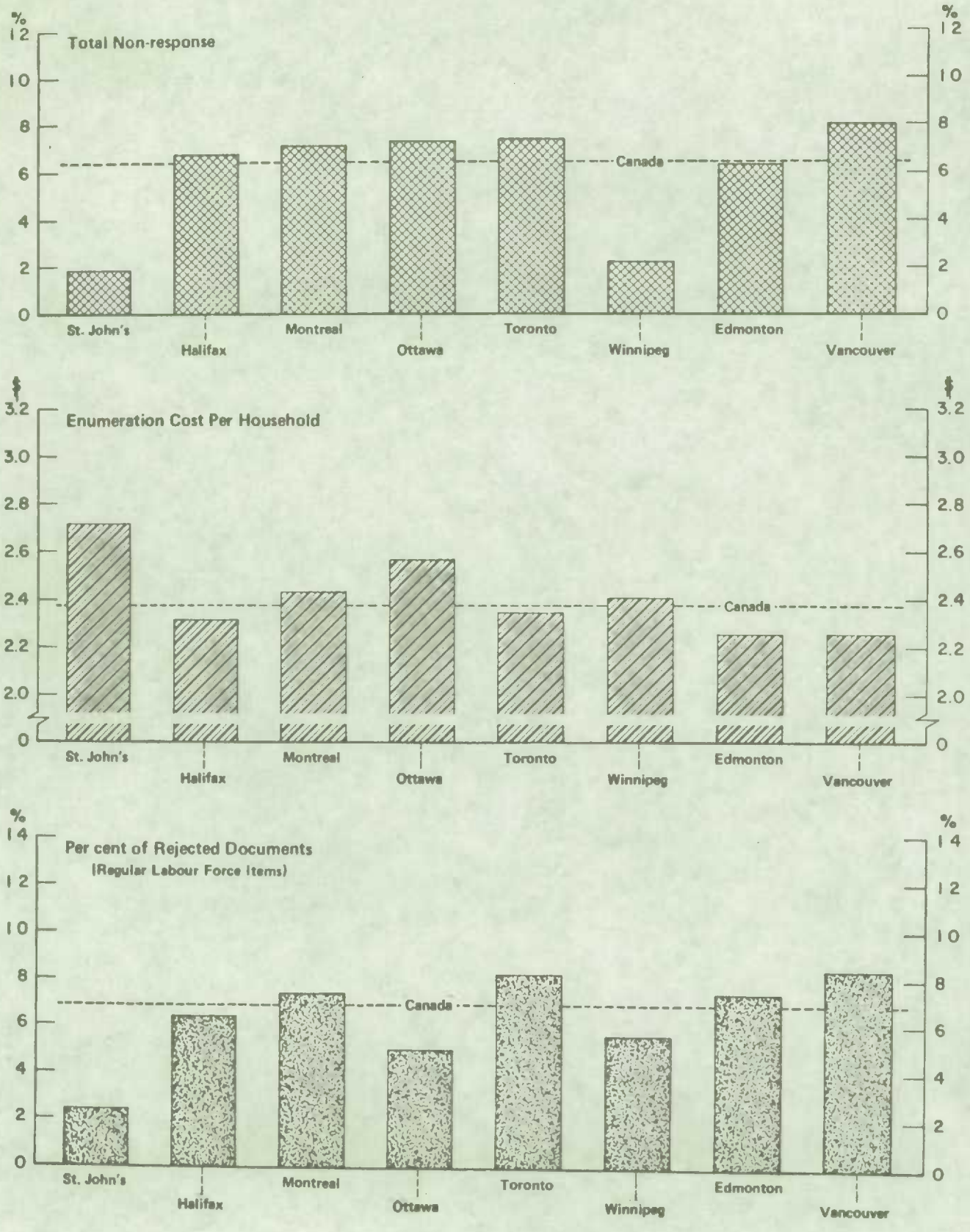
Slippage Rates by Province
March 1974



(1) The Above Rates are Calculated on Population Projections Based on 1971 Census.

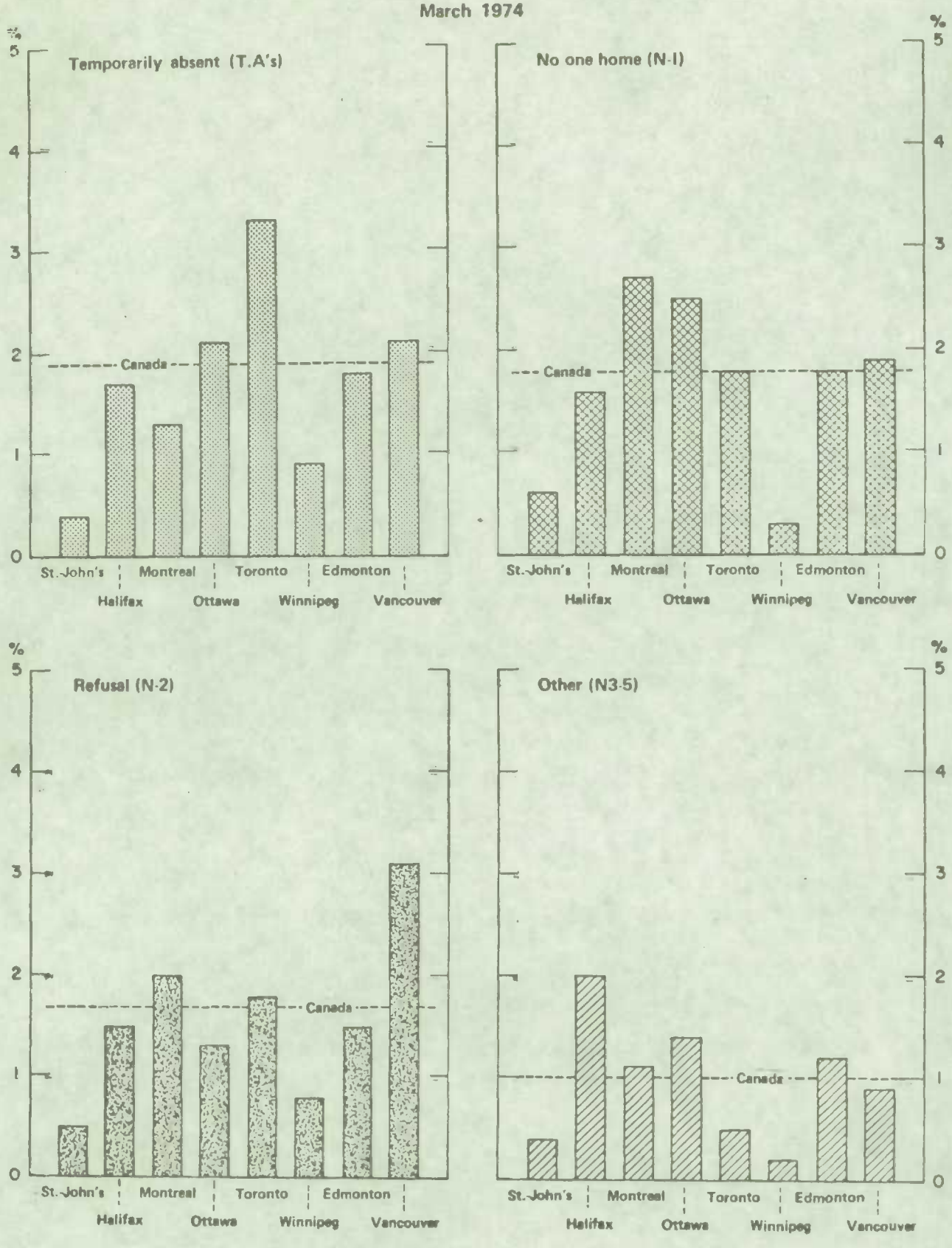
Non-response Rates, Enumeration Cost and Rejected Documents by Regional Office

March 1974



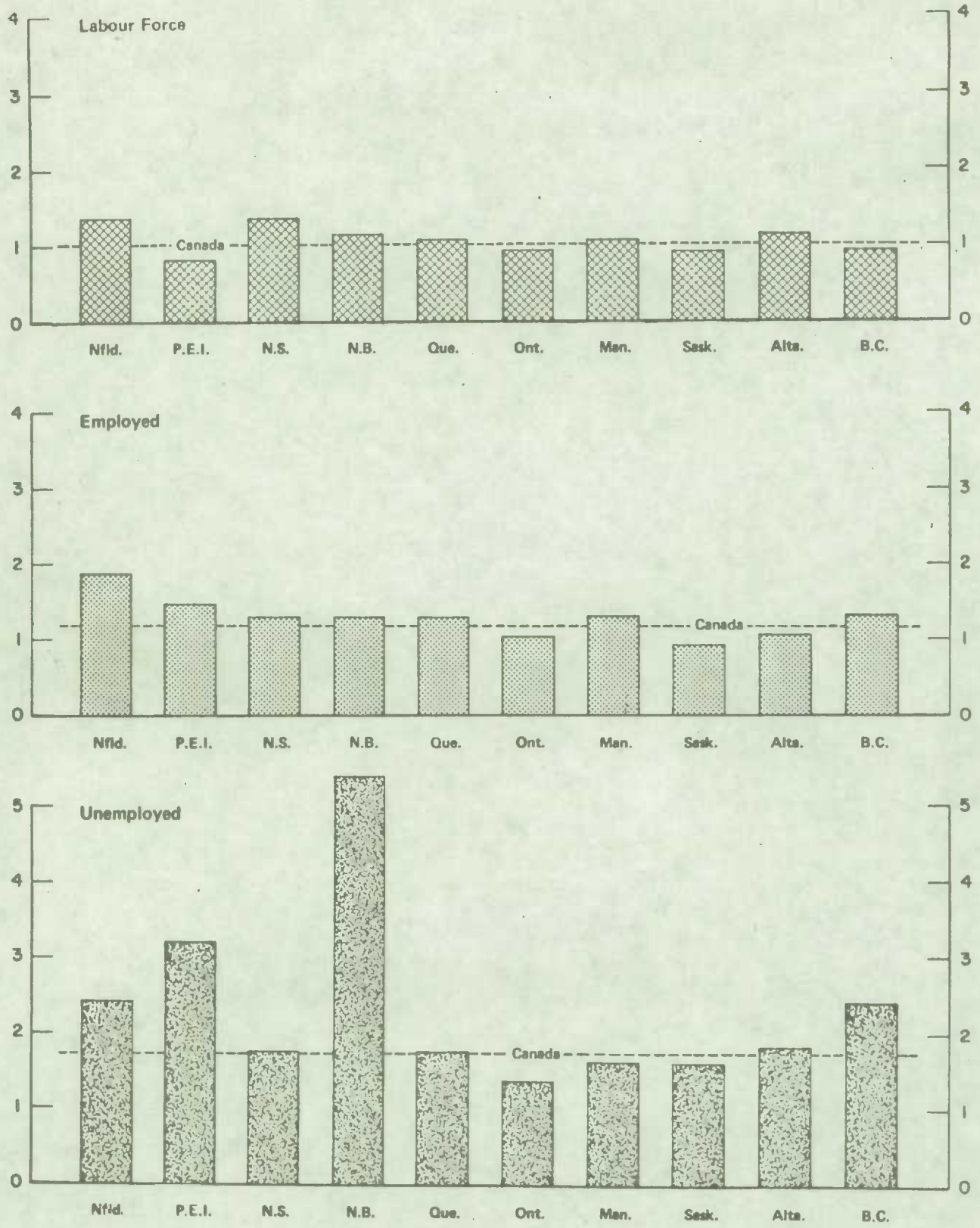
Non-response Rates, by Component

March 1974

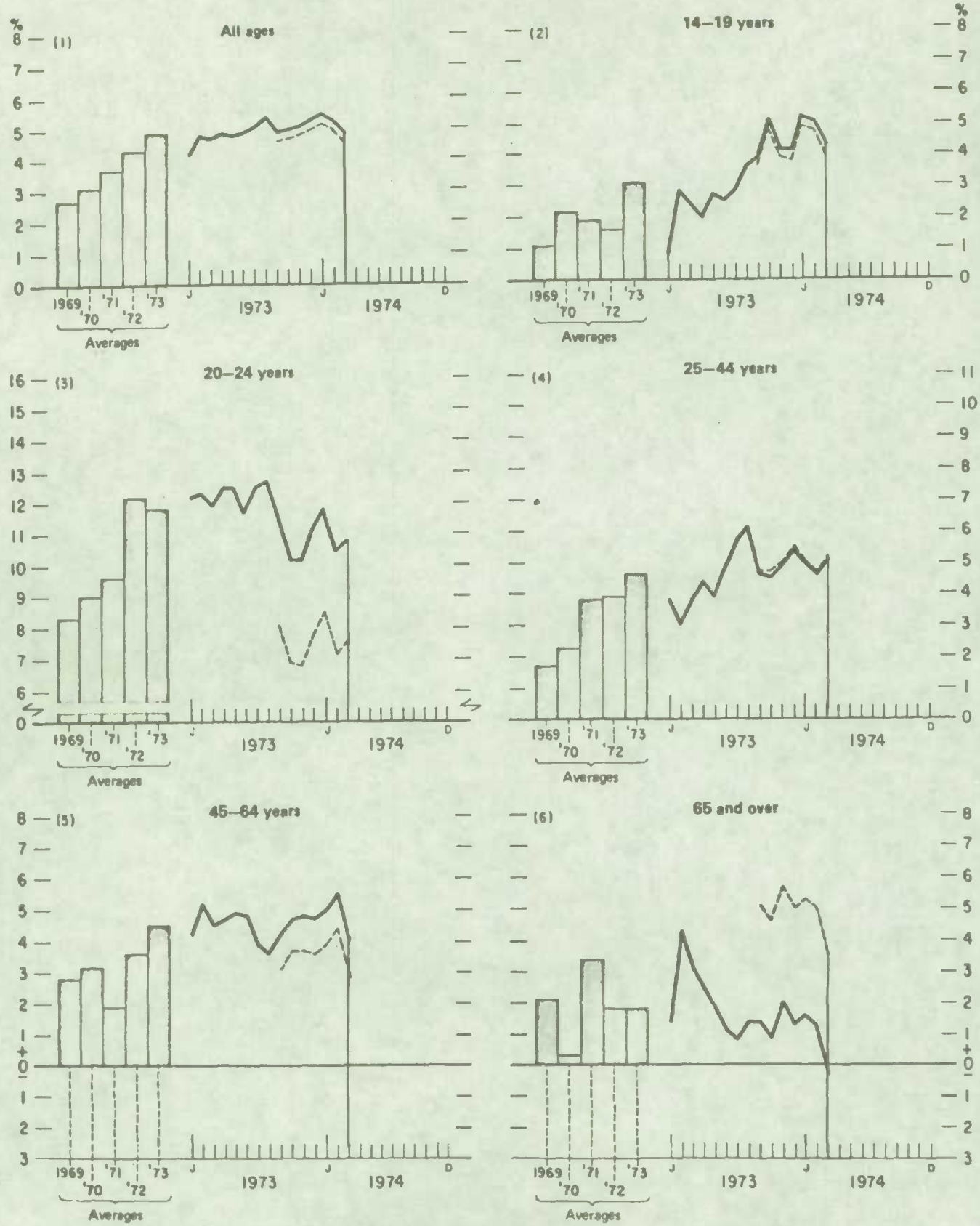


Binomial Factors for the Labour Force, Employed and Unemployed, Canada and the Provinces

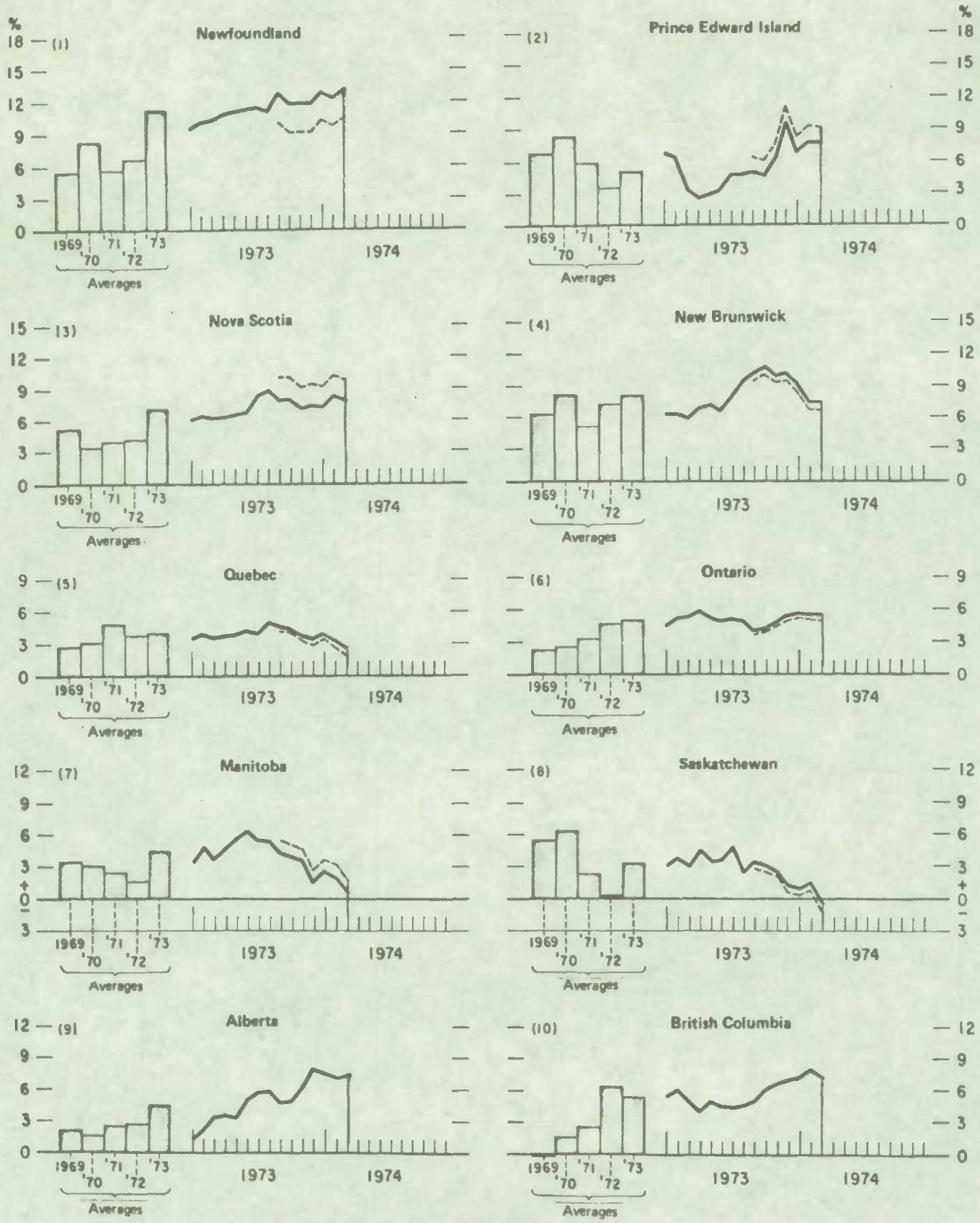
March 1974



Slippage by Age Group at the Canada Level



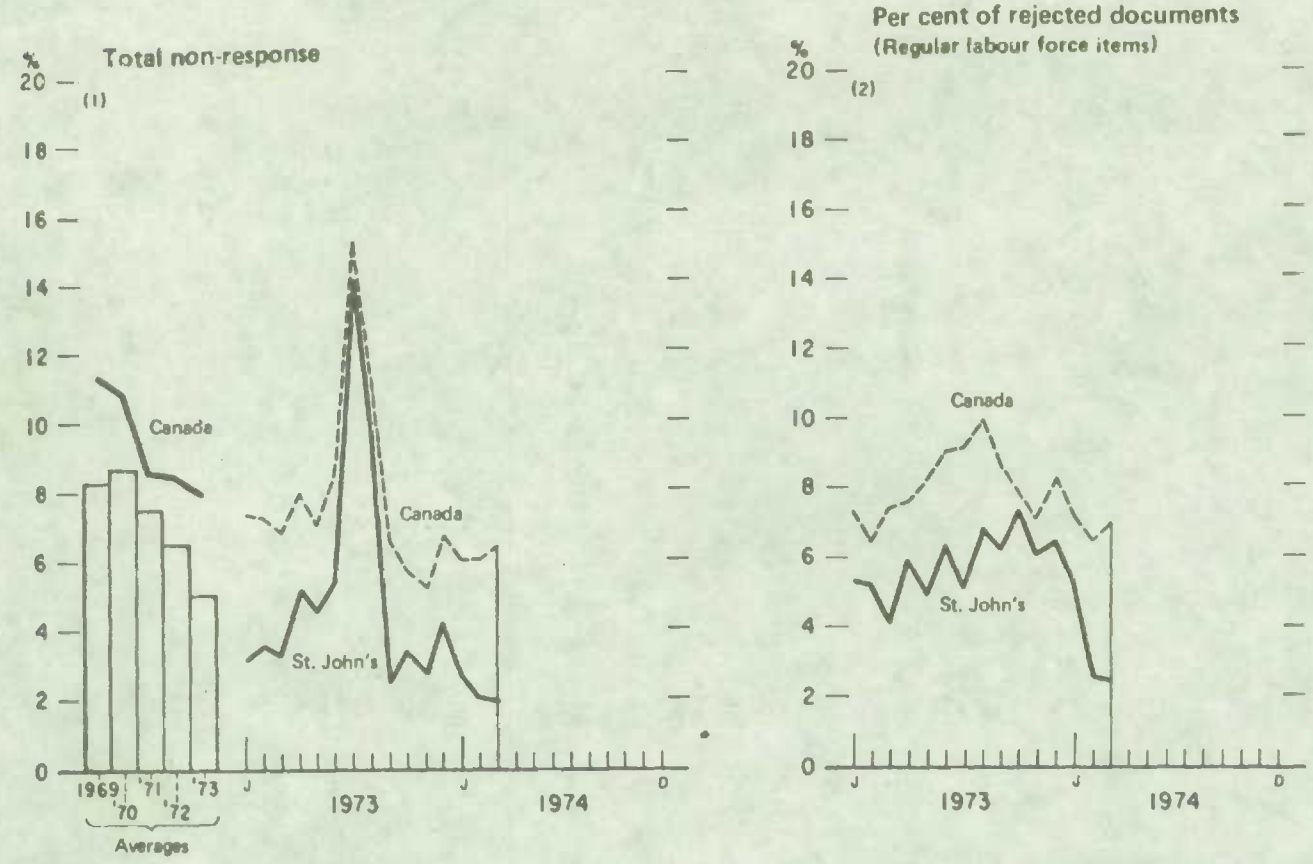
Slippage by Province



Slippage rates were calculated on population projections based on 1961 census

Slippage rates were calculated on preliminary population projections based on 1971 census

St. John's Regional Office

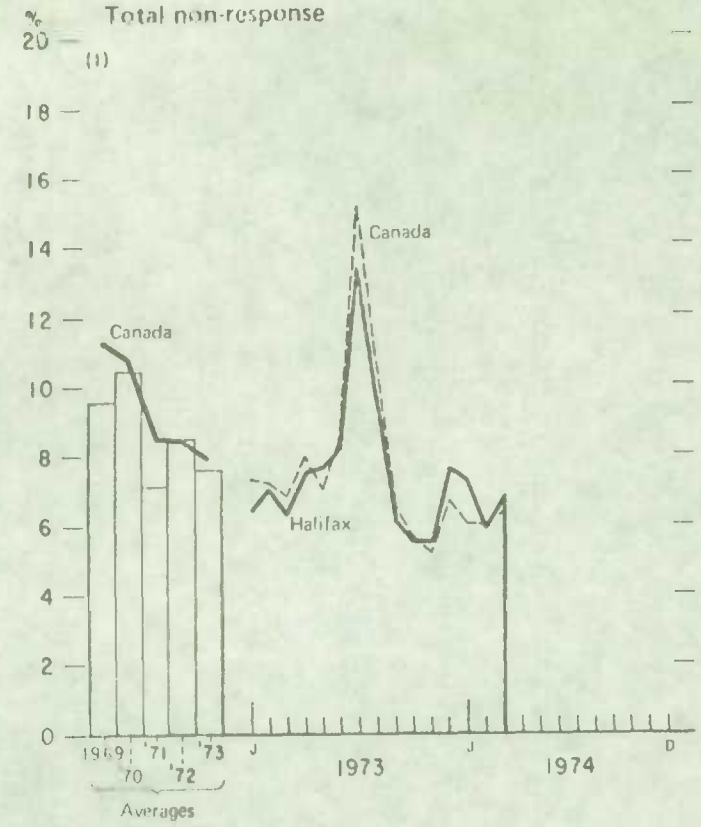


(a) Include supplementary questions appearing on the LFS regular schedule.

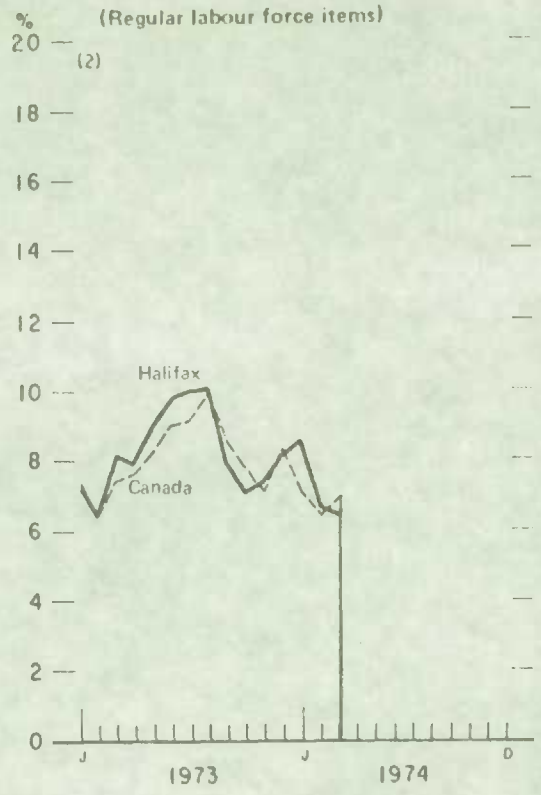
* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.

Halifax Regional Office

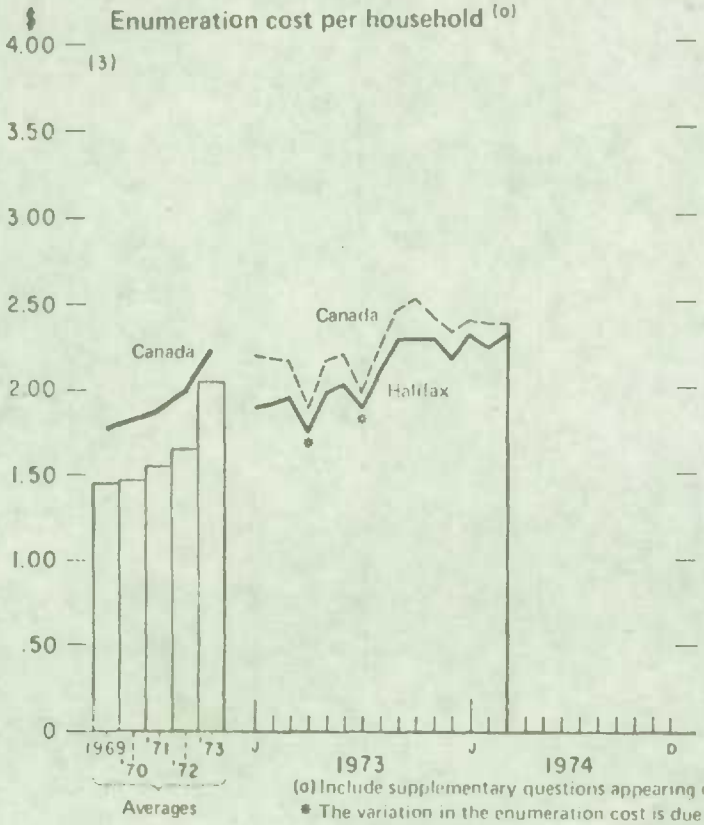
Total non-response



Per cent of rejected documents
(Regular labour force items)



Enumeration cost per household [o]

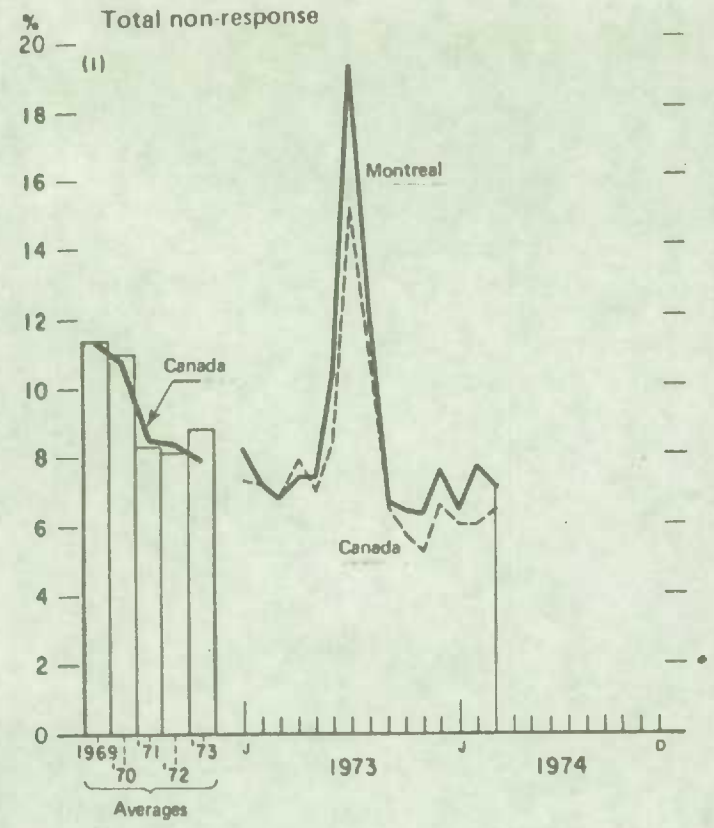


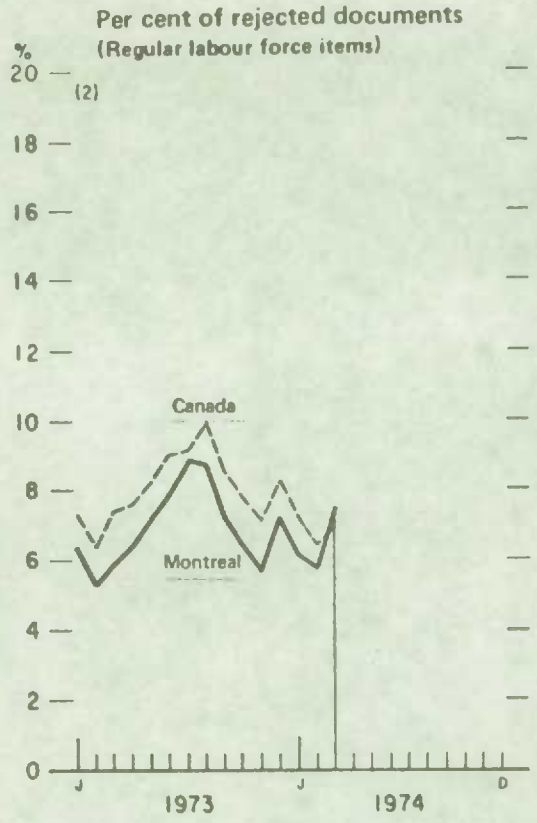
Enumeration cost per household
by type of area [o]

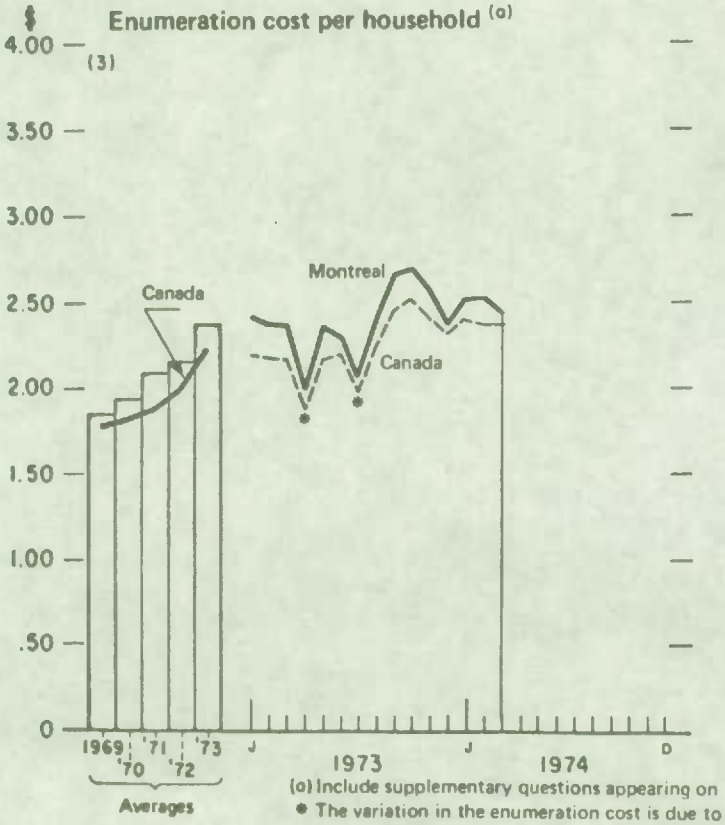
(o) Include supplementary questions appearing on the LFS regular schedule.

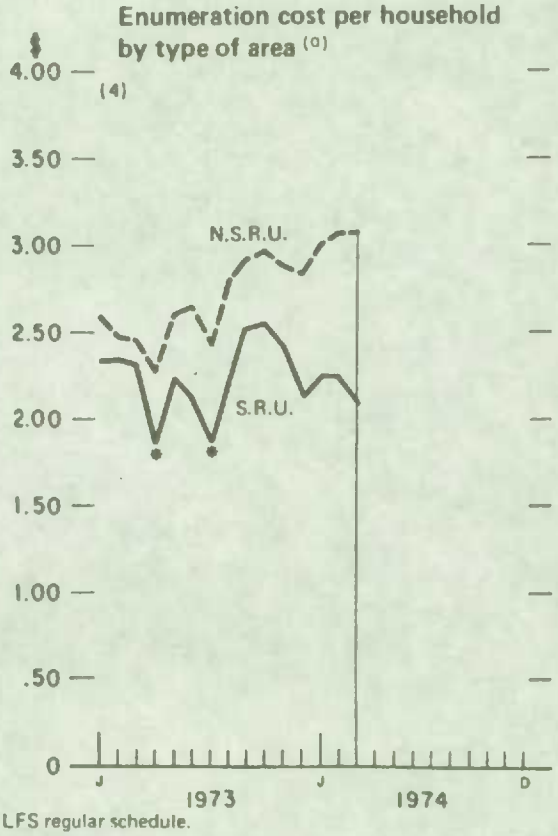
* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.

Montreal Regional Office



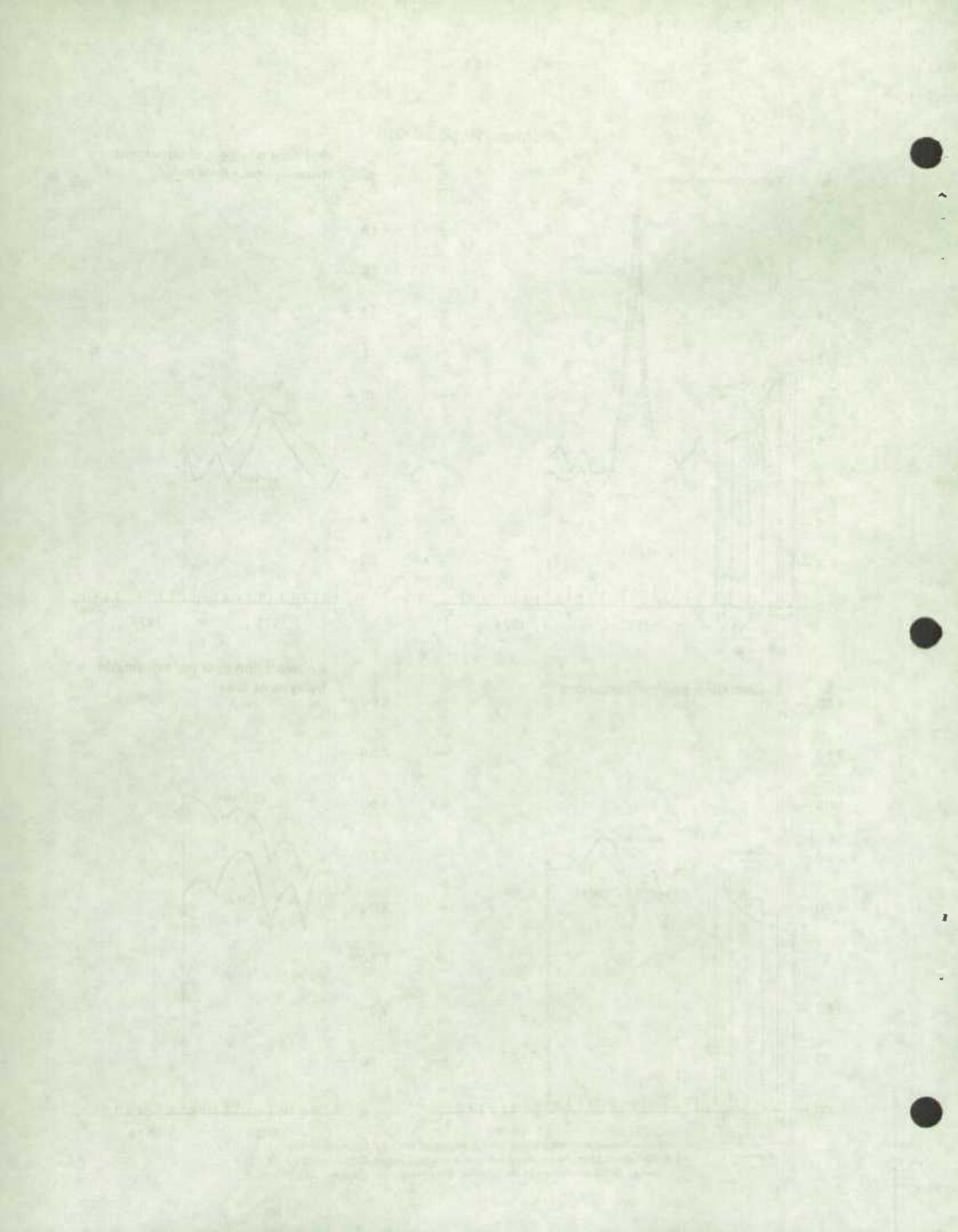




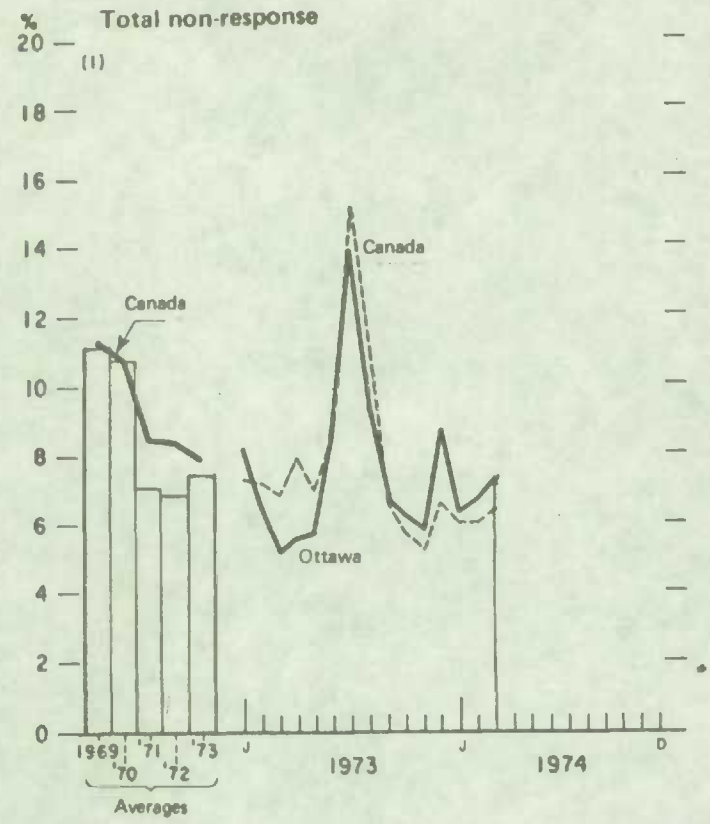


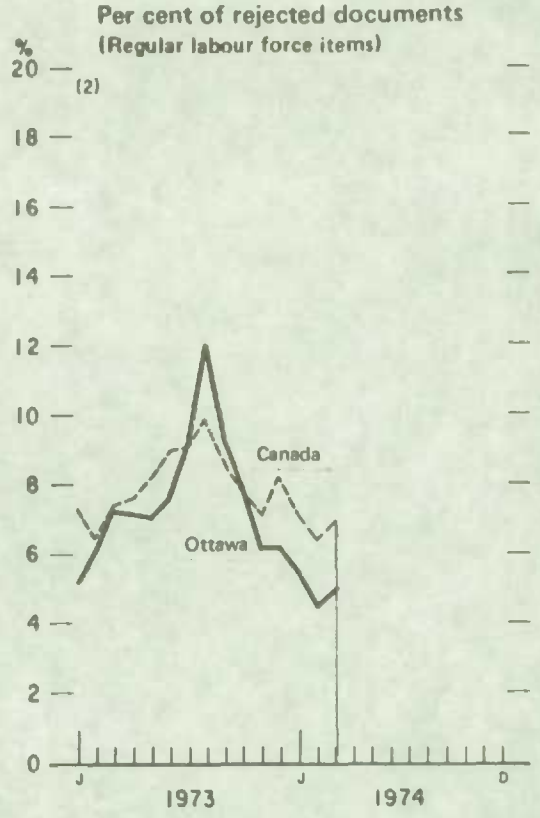
(a) Include supplementary questions appearing on the LFS regular schedule.

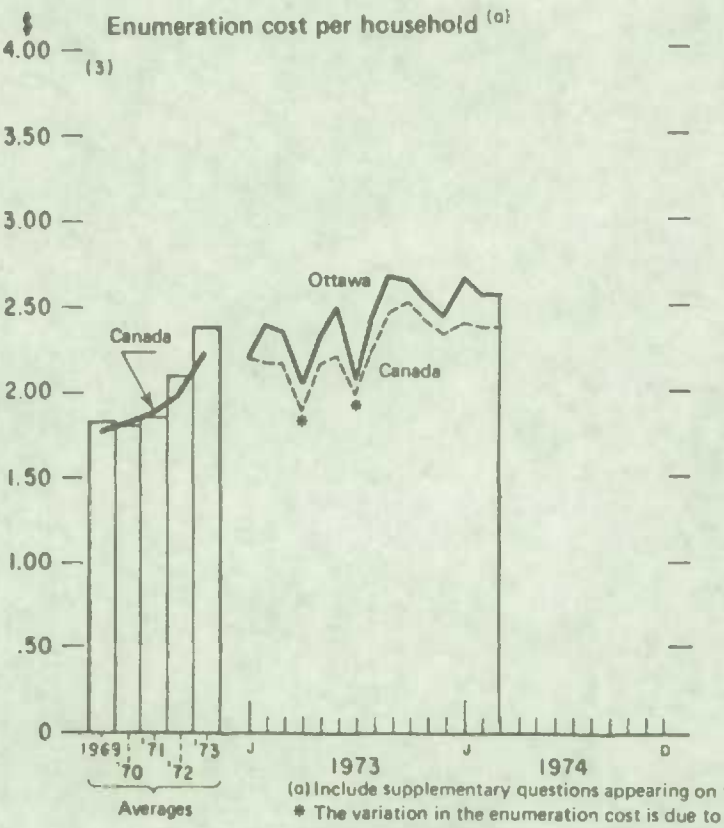
* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.

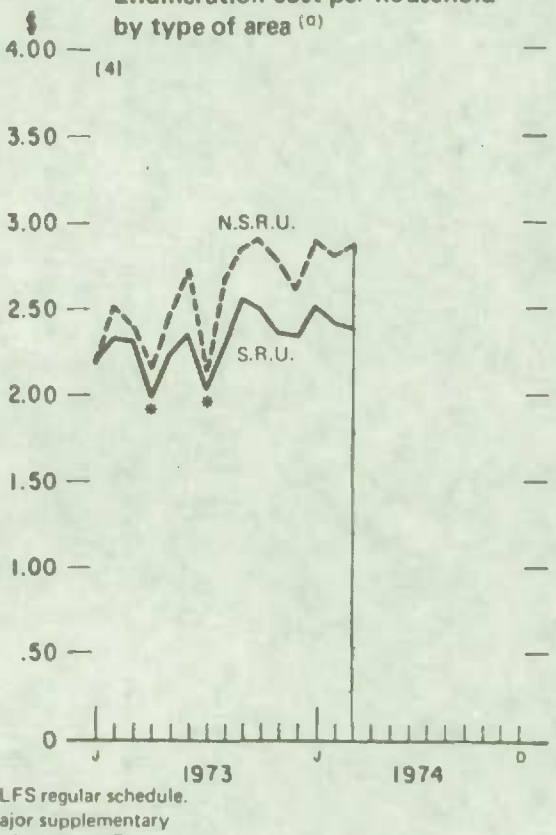


Ottawa Regional Office



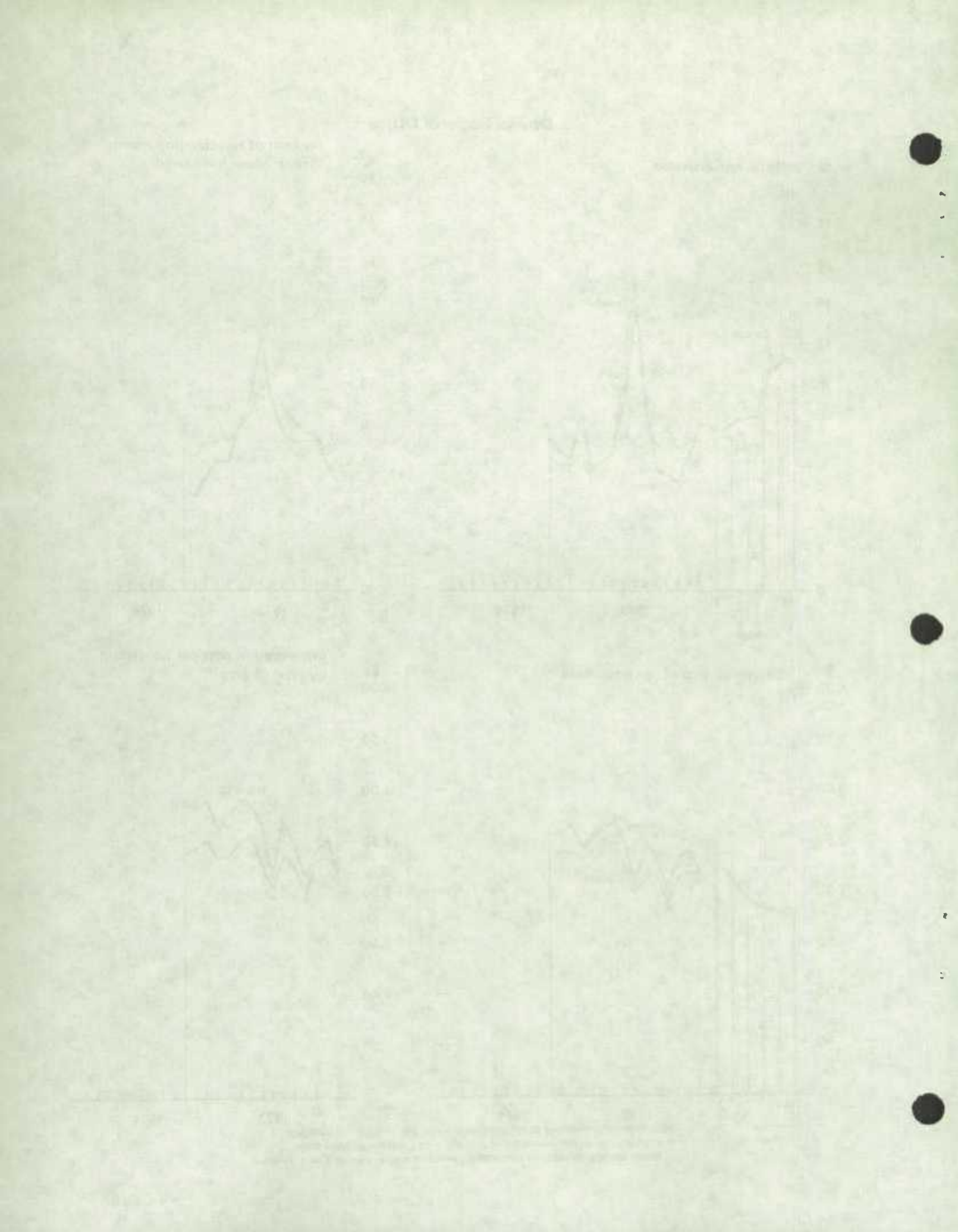




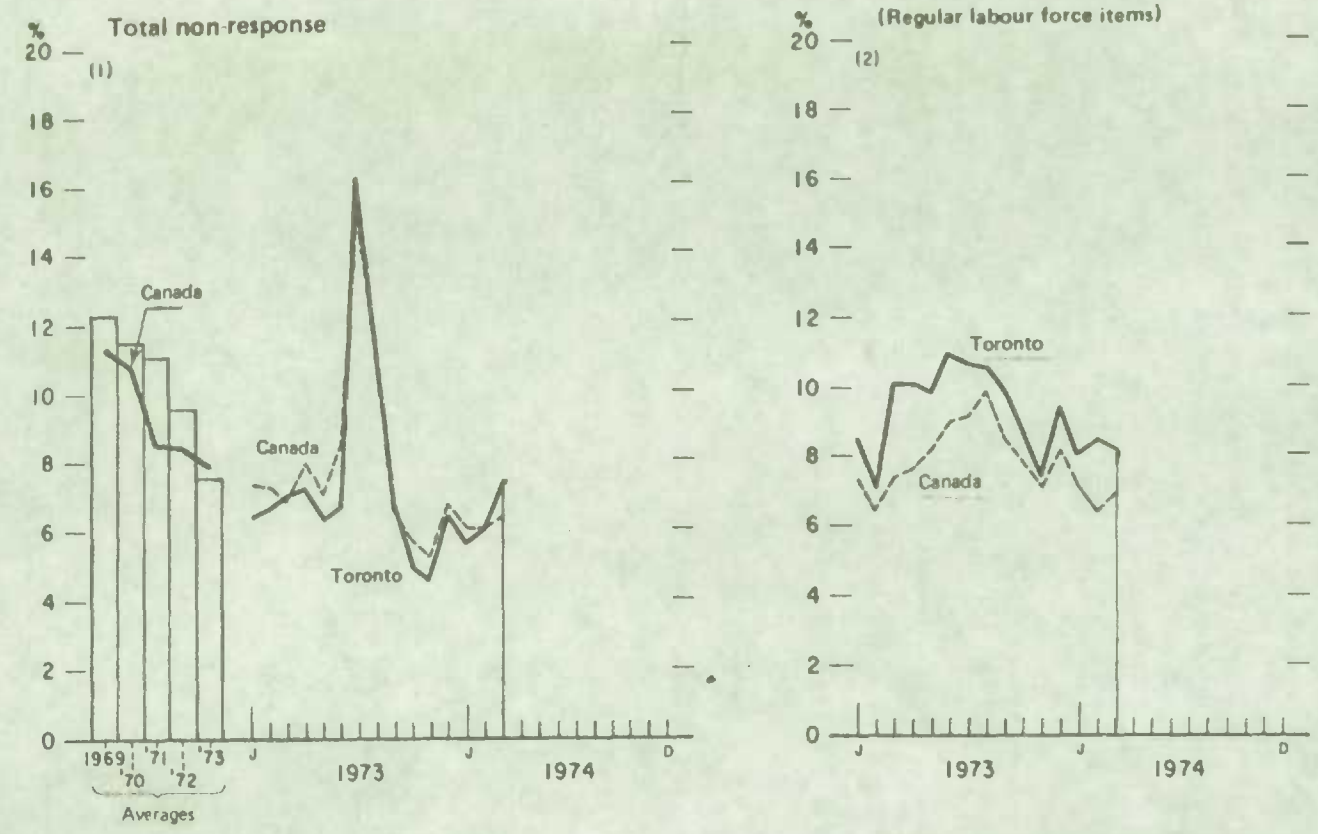


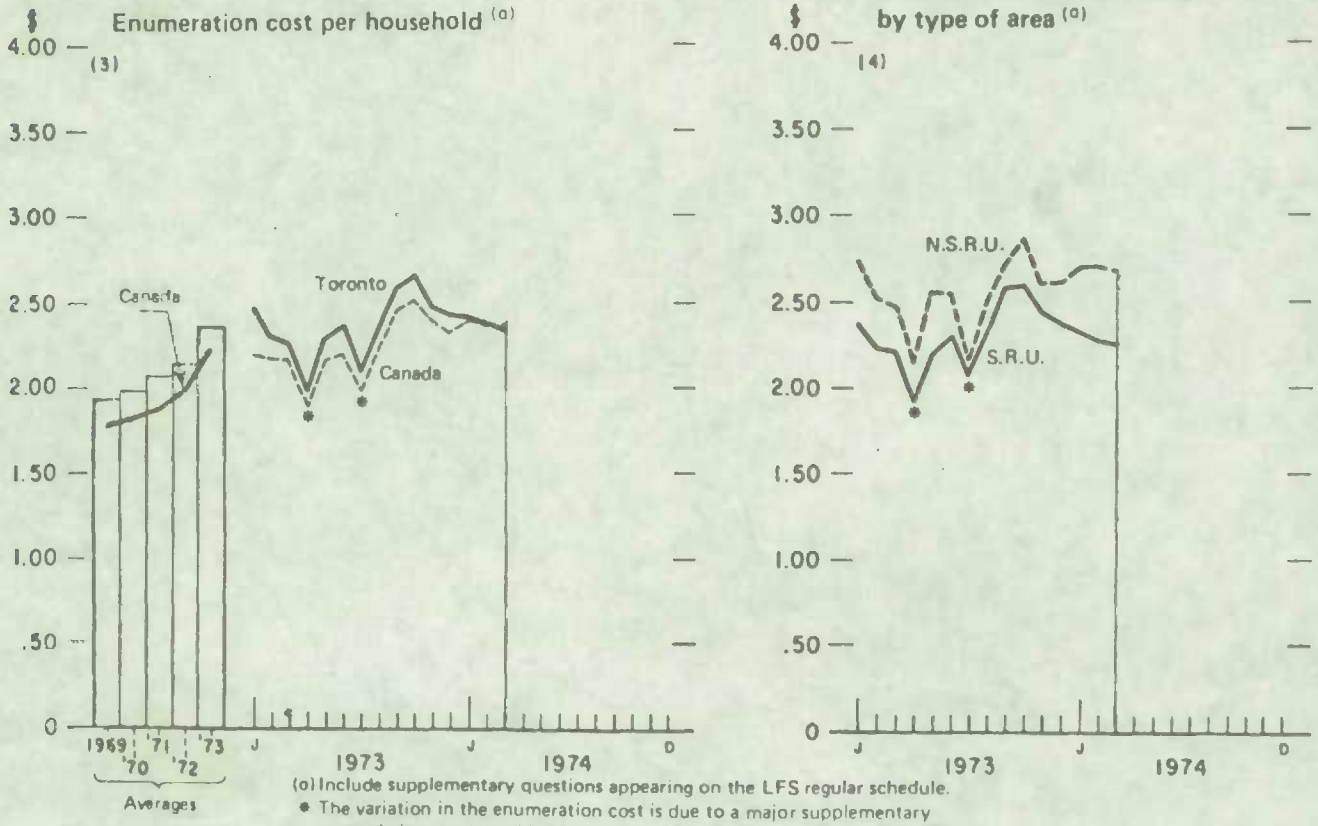
(a) Include supplementary questions appearing on the LFS regular schedule.

* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.



Toronto Regional Office

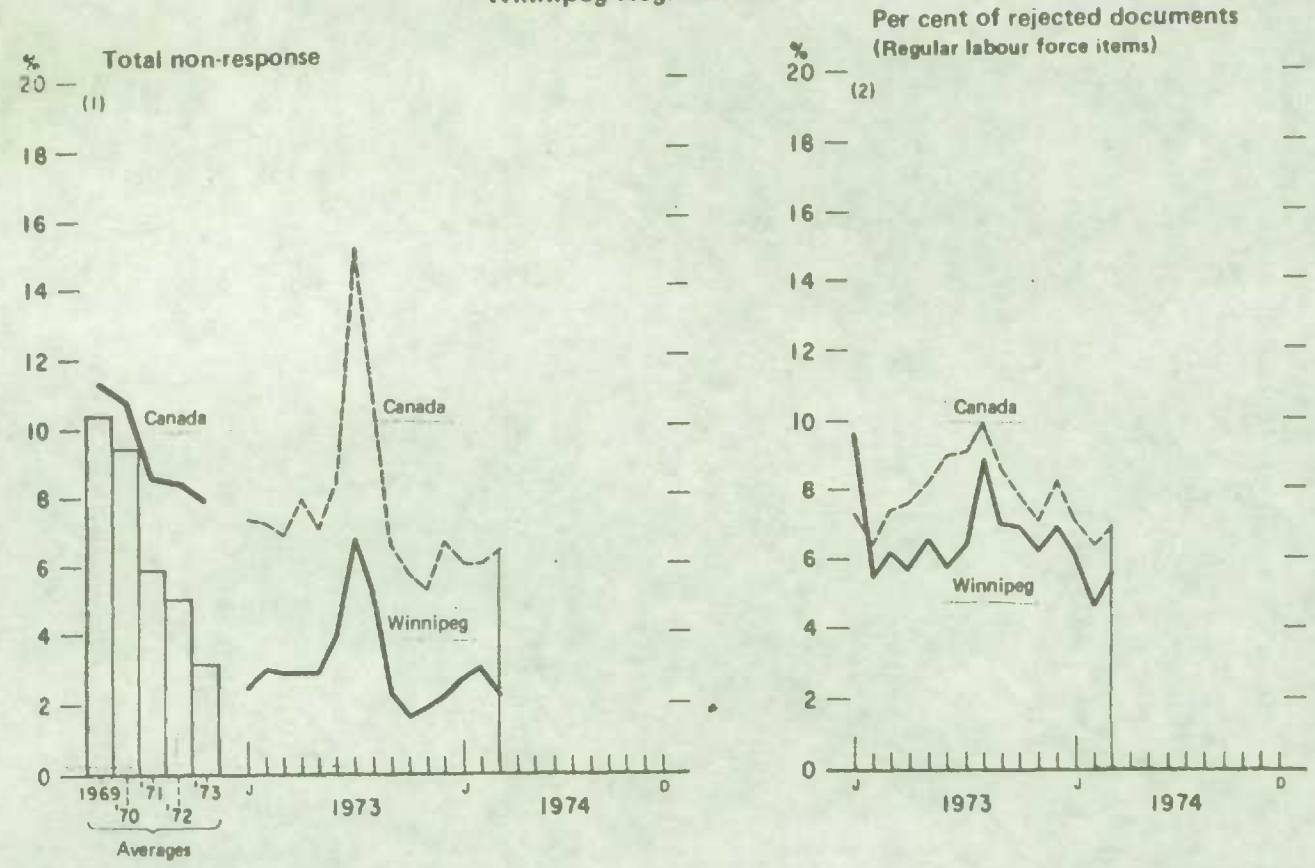




(a) Include supplementary questions appearing on the LFS regular schedule.

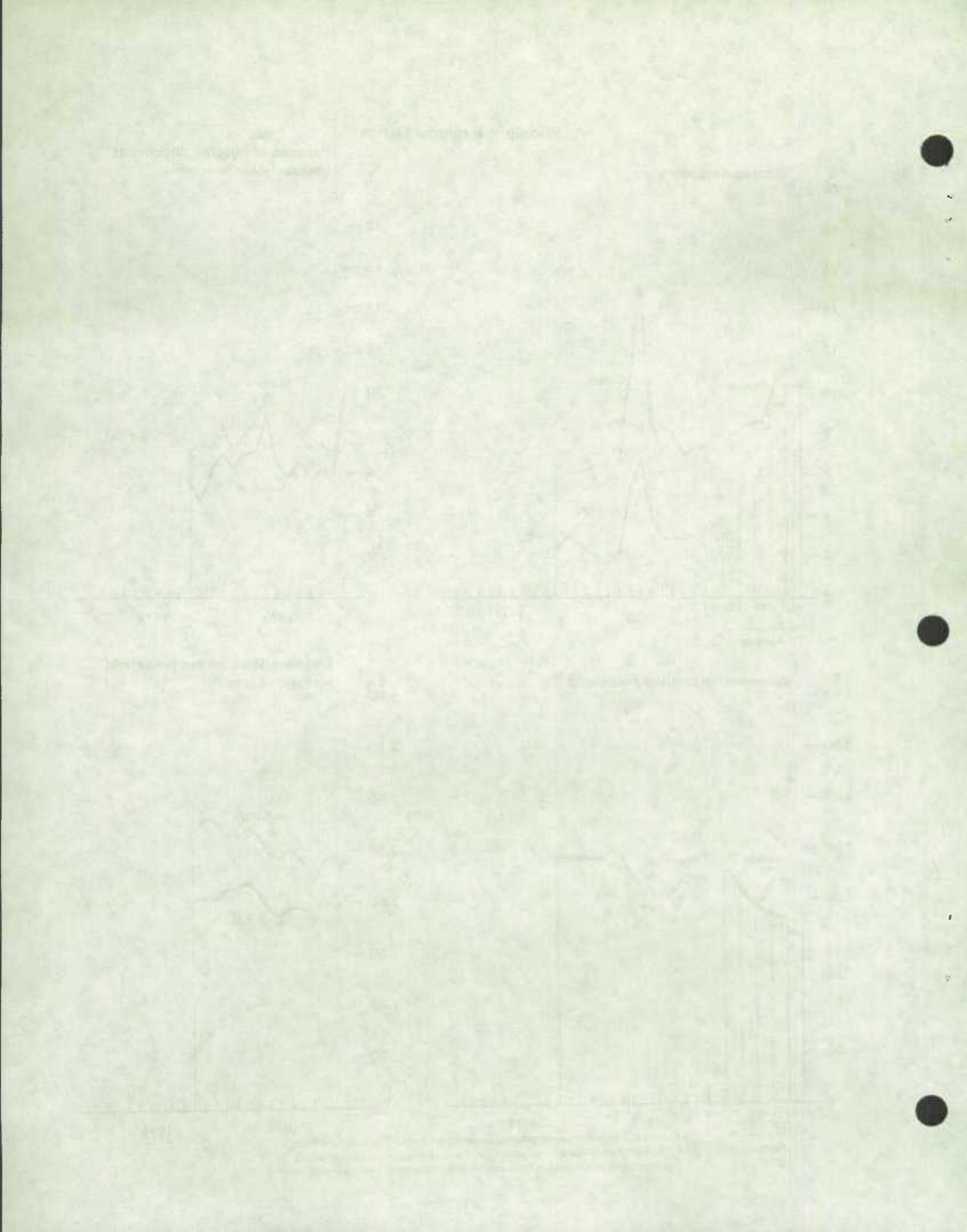
* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.

Winnipeg Regional Office

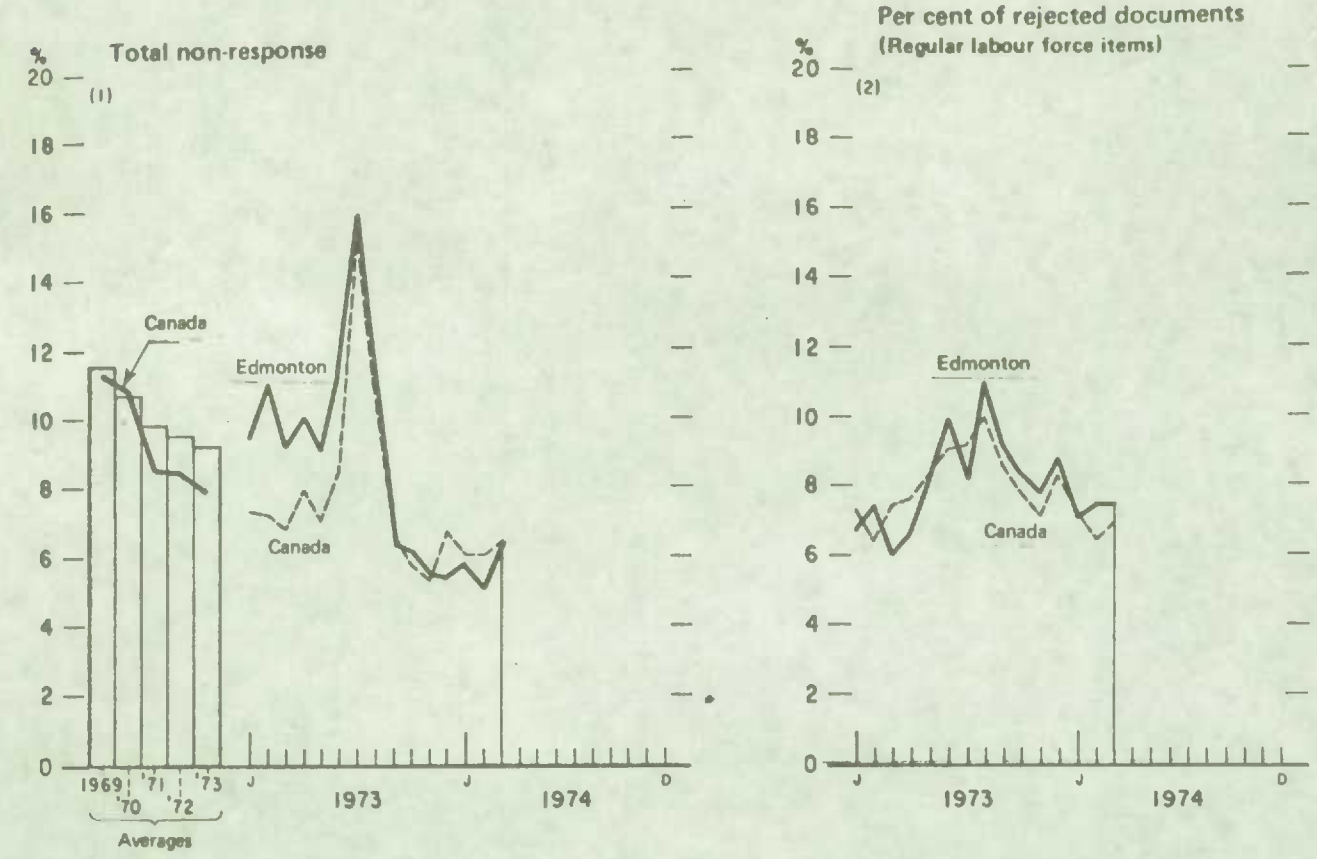


(a) Include supplementary questions appearing on the LFS regular schedule.

* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.

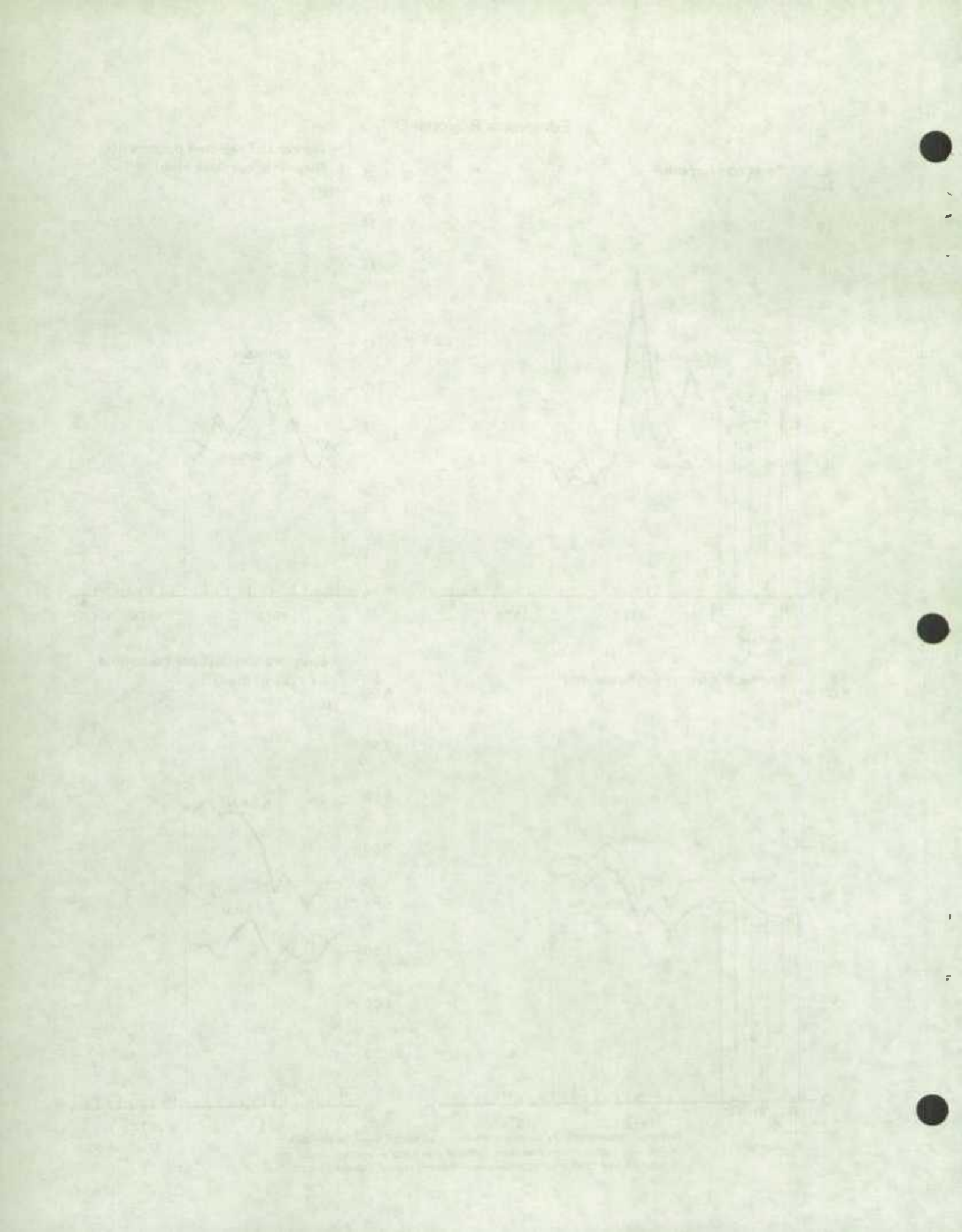


Edmonton Regional Office

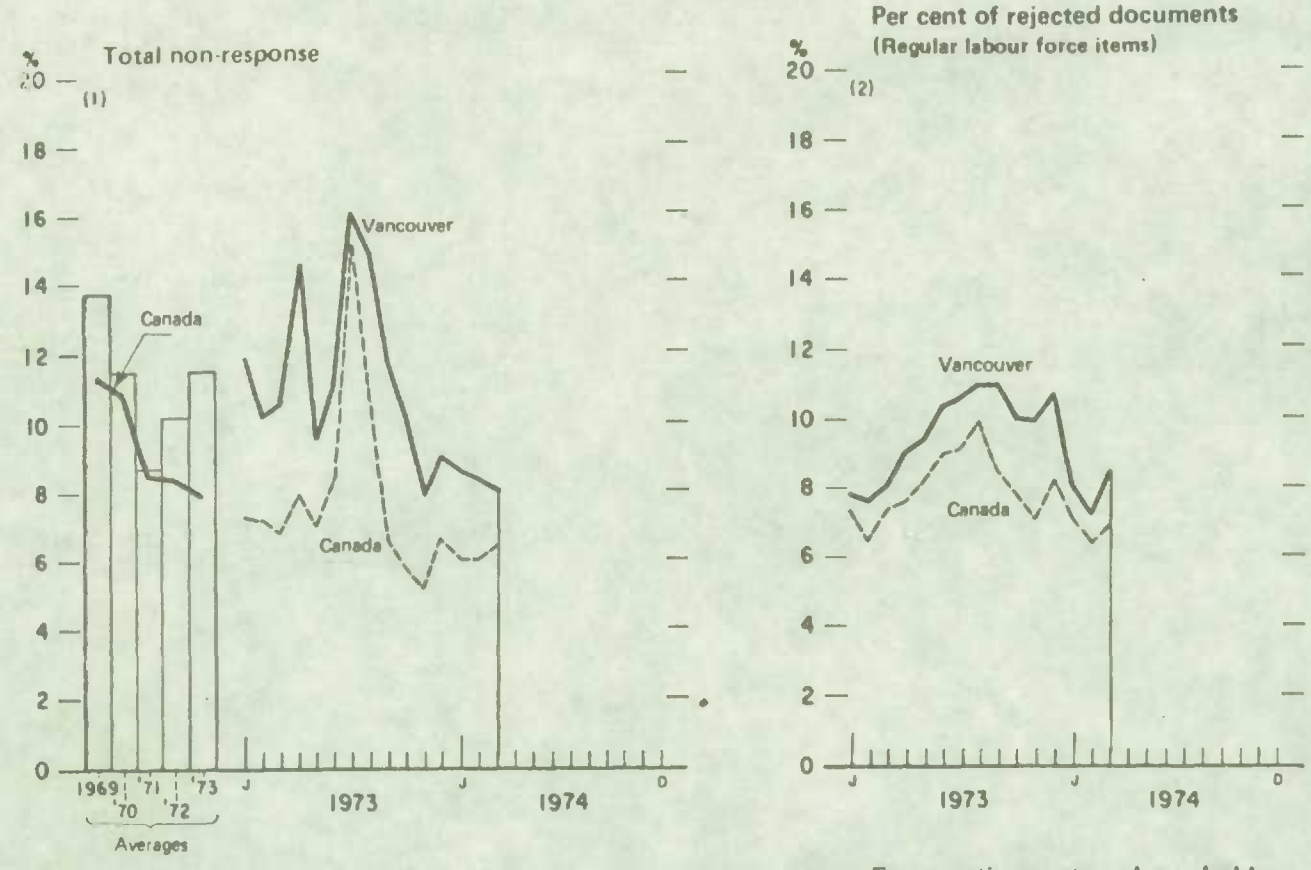


(a) Include supplementary questions appearing on the LFS regular schedule.

* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.



Vancouver Regional Office



(a) Include supplementary questions appearing on the LFS regular schedule.

* The variation in the enumeration cost is due to a major supplementary survey being conducted in conjunction with the regular Labour Force Survey.

Non-Response Rates by Component, Canada and the Regional Offices
February and March 1972, 1973 and 1974

	1974		1973		1972	
	March	Feb.	March	Feb.	March	Feb.
Total						
Canada	6.4	6.0	6.8	7.2	9.8	9.2
St. John's	1.9	2.0	3.2	3.5	6.9	6.8
Halifax	6.8	5.9	6.3	7.0	11.5	9.6
Montreal	7.1	7.7	6.8	7.2	8.2	7.8
Ottawa	7.3	6.7	5.2	6.6	9.8	8.2
Toronto	7.4	6.0	7.0	6.6	13.0	12.2
Winnipeg	2.2	3.0	2.8	2.9	6.0	5.6
Edmonton	6.3	5.0	9.1	11.0	8.3	10.6
Vancouver	8.0	8.4	10.5	10.2	9.9	9.0
Temporarily Absent						
Canada	1.9	1.8	1.9	2.2	2.7	2.3
St. John's	0.4	0.6	1.1	0.9	3.4	3.0
Halifax	1.7	1.3	1.8	1.6	2.5	1.6
Montreal	1.3	1.6	1.1	1.8	1.6	1.7
Ottawa	2.1	1.4	1.8	2.8	4.3	3.0
Toronto	3.3	2.5	2.6	2.6	4.1	2.5
Winnipeg	0.9	1.5	1.0	1.5	2.0	2.4
Edmonton	1.8	1.9	3.4	3.9	2.6	3.2
Vancouver	2.1	2.4	1.9	2.2	2.0	2.2
No one home						
Canada	1.8	1.7	2.0	2.1	3.3	3.4
St. John's	0.6	0.6	1.2	1.4	1.7	2.4
Halifax	1.6	1.9	1.6	1.9	3.3	3.3
Montreal	2.7	2.0	2.1	2.3	3.1	3.3
Ottawa	2.5	3.2	1.5	1.2	2.7	2.5
Toronto	1.8	1.3	1.9	1.9	4.8	5.6
Winnipeg	0.3	0.7	0.9	0.5	1.2	1.2
Edmonton	1.8	1.2	2.7	2.8	3.4	3.4
Vancouver	1.9	2.4	3.4	3.8	3.3	2.7
Refusals						
Canada	1.7	1.6	1.9	1.9	1.7	1.5
St. John's	0.5	0.6	0.6	0.7	0.4	0.3
Halifax	1.5	1.6	2.1	2.2	1.2	1.1
Montreal	2.0	2.1	2.1	2.4	1.9	1.8
Ottawa	1.3	1.3	1.5	1.5	1.3	0.9
Toronto	1.8	1.5	1.9	1.6	2.2	1.9
Winnipeg	0.8	0.6	0.7	0.8	1.9	1.3
Edmonton	1.5	1.4	2.2	2.3	1.3	1.0
Vancouver	3.1	2.8	2.5	2.3	2.6	2.2
Other						
Canada	1.0	0.9	1.0	1.0	2.1	2.0
St. John's	0.4	0.2	0.3	0.5	1.4	1.1
Halifax	2.0	1.1	0.8	1.3	4.5	3.6
Montreal	1.1	2.0	1.5	0.7	1.6	1.0
Ottawa	1.4	0.8	0.4	1.1	1.5	1.8
Toronto	0.5	0.7	0.6	0.5	1.9	2.2
Winnipeg	0.2	0.2	0.2	0.1	0.9	0.7
Edmonton	1.2	0.5	0.8	2.0	1.0	3.0
Vancouver	0.9	0.8	2.7	1.9	2.0	1.9

STATISTICS CANADA — STATISTIQUE CANADA

FIELD DIVISION — DIVISION DES OPÉRATIONS RÉGIONALES

LFS 7

LABOUR FORCE SURVEY
ENQUÊTE SUR LA MAIN-D'OEUVRE

ANALYSIS OF REJECTED DOCUMENTS
ANALYSE DES DOCUMENTS REJETÉS

SURVEY No. 285
ENQUÊTE

March, 1974

	CANADA	ST.JOHN'S	HALIFAX	MONTRÉAL	OTTAWA	TORONTO	WINNIPEG	EDMONTON	VANCOUVER
TOTAL DOCUMENTS RECEIVED TOTAL DES DOCUMENTS REÇUS	76,859	4,553	13,211	15,003	4,789	15,434	7,408	8,376	8,085
LABOUR FORCE ITEMS ARTICLES DE LA MAIN-D'OEUVRE									
REJECTED DOCUMENTS DOCUMENTS REJETÉS	5,282	112	838	1,115	238	1,261	416	623	679
% OF TOTAL DOCUMENTS POURCENTAGE DE TOUS LES DOCUMENTS	6.9	2.4	6.4	7.4	5.0	8.2	5.6	7.4	8.4
% OF REJECTED DOCUMENTS POURCENTAGE DES DOCUMENTS REJETÉS	99.9	100.0	99.8	100.0	99.6	99.8	100.0	100.0	99.9
No. OF CARELESS ERRORS NOMBRE DE FAUTES D'INATTENTION	3,145	36	423	747	76	819	288	326	430
AVE. PER DOCUMENT MOYENNE PAR DOCUMENT	.041	.008	.032	.050	.016	.053	.039	.039	.05
AVE. PER REJECTED DOCUMENT MOYENNE PAR DOCUMENT REJETÉ	.595	.321	.504	.670	.318	.648	.692	.523	.63
No. OF BLANKS IN ID. NOMBRE DE BLANCS À L'IDENTIFICATION	1,415	9	223	343	30	271	155	147	237
AVERAGE PER DOCUMENT MOYENNE PAR DOCUMENT	.018	.002	.017	.023	.006	.018	.021	.018	.02
AVE. PER REJECTED DOCUMENT MOYENNE PAR DOCUMENT REJETÉ	.268	.080	.265	.308	.126	.214	.372	.236	.34

CARELESS ERROR: sum of errors for items 1 to 10 and 24, 25, and 26 on the LFS document.
FAUTE D'INATTENTION: total des erreurs aux articles 1-10 et 24, 25 et 26 sur le document LFS.

Summary of Careless Errors in the Categories of Invalid Interviewer Status (Question 26) and Errors in Identification, by Regional Office

March 1974 - Survey 285

	Canada	St. J.	Hal.	Mont.	Ott.	Tor.	Wnp.	Edm.	Van
Number of Careless Errors	3145	36	423	747	76	819	288	326	430
Invalid Interviewer Status (Item 26)	679	12	121	135	36	167	72	80	56
% of total Careless Errors	21.6	33.3	28.6	18.1	47.4	20.4	25.0	24.5	13.0
Identification (Items 1 to 4)	557	6	89	122	11	83	63	70	113
% of total Careless Errors	17.7	16.7	21.0	16.3	14.5	10.1	21.9	21.5	26.3
Combined % (Items 1-4 and 26)	39.3	50.0	49.6	34.4	61.9	30.5	46.9	46.0	39.3

Enumeration Cost per Household by Regional Office, S.R.U. and N.S.R.U.
October 1972 to March 1973 and October 1973 to March 1974

	1974			1973			1973			1972		
	March	Feb.	Jan.	Dec.	Nov.	Oct.	March	Feb.	Jan.	Dec.	Nov.	Oct.
All areas												
Canada ... $	2.38	2.38	2.40	2.32	2.41	2.52	2.17	2.18	2.20	2.20	2.15	2.10
St. John's ... $	2.72	2.75	2.78	2.70	2.75	2.89	2.52	2.47	2.35	2.42	2.42	2.35
Halifax ... $	2.32	2.24	2.31	2.18	2.29	2.29	1.95	1.92	1.90	1.86	1.80	1.75
Montreal ... $	2.43	2.53	2.52	2.37	2.58	2.70	2.37	2.38	2.42	2.47	2.28	2.27
Ottawa ... $	2.57	2.57	2.66	2.44	2.53	2.66	2.36	2.40	2.20	2.35	2.38	2.26
Toronto ... $	2.35	2.39	2.42	2.43	2.47	2.67	2.27	2.31	2.48	2.43	2.40	2.29
Winnipeg ... $	2.41	2.43	2.42	2.40	2.39	2.48	2.24	2.21	2.22	2.21	2.24	2.16
Edmonton ... $	2.26	2.21	2.24	2.11	2.22	2.29	1.79	1.91	1.93	1.89	1.85	1.88
Vancouver ... $	2.26	2.19	2.19	2.16	2.19	2.37	2.00	1.99	1.98	1.96	1.99	1.97
S.R.U.												
Canada ... $	2.09	2.14	2.14	2.10	2.24	2.35	2.04	2.06	2.14	2.10	2.04	1.99
St. John's ... $	2.27	2.28	2.27	2.13	2.15	2.37	2.18	2.13	2.14	2.12	1.98	1.92
Halifax ... $	2.10	2.17	2.11	2.04	2.16	2.07	1.68	1.62	1.71	1.64	1.63	1.58
Montreal ... $	2.09	2.25	2.25	2.12	2.42	2.55	2.32	2.34	2.33	2.41	2.23	2.18
Ottawa ... $	2.39	2.43	2.51	2.33	2.35	2.50	2.32	2.33	2.20	2.34	2.33	2.19
Toronto ... $	2.24	2.28	2.31	2.37	2.43	2.59	2.19	2.23	2.39	2.32	2.30	2.23
Winnipeg ... $	2.01	2.05	2.02	2.12	2.13	2.21	2.04	1.93	2.05	2.03	1.98	1.97
Edmonton ... $	1.63	1.56	1.56	1.40	1.63	1.74	1.43	1.61	1.68	1.61	1.55	1.57
Vancouver ... $	2.04	1.99	1.97	1.98	2.08	2.27	1.90	1.89	2.01	1.88	1.84	1.84
N.S.R.U.												
Canada ... $	2.75	2.70	2.75	2.61	2.64	2.74	2.31	2.33	2.29	2.32	2.29	2.23
St. John's ... $	2.89	2.92	2.95	2.90	2.96	3.08	2.64	2.59	2.43	2.54	2.58	2.52
Halifax ... $	2.46	2.30	2.45	2.27	2.37	2.44	2.12	2.12	2.02	2.00	1.90	1.86
Montreal ... $	3.07	3.06	3.00	2.83	2.88	2.96	2.46	2.47	2.60	2.58	2.39	2.43
Ottawa ... $	2.89	2.81	2.89	2.60	2.79	2.90	2.41	2.51	2.19	2.36	2.45	2.37
Toronto ... $	2.67	2.70	2.69	2.60	2.59	2.86	2.47	2.52	2.74	2.76	2.64	2.43
Winnipeg ... $	2.80	2.79	2.81	2.66	2.64	2.73	2.42	2.45	2.38	2.38	2.46	2.32
Edmonton ... $	2.91	2.89	2.96	2.83	2.84	2.83	2.14	2.18	2.17	2.16	2.14	2.16
Vancouver ... $	2.60	2.52	2.52	2.44	2.35	2.53	2.17	2.15	1.95	2.10	2.23	2.20

	Month-to-month change								Year-to-year change			
	1974		Dec. 1973 to Jan. 1974	1973	1973		Dec. 1972 to Jan. 1973	1972	March 1973 to March 1974	Feb. 1973 to Feb. 1974	Jan. 1973 to Jan. 1974	Dec. 1972 to Dec. 1973
	Feb. to March	Jan. to Feb.		Nov. to Dec.	Feb. to March	Jan. to Feb.		Nov. to Dec.				
All areas												
Canada ... $	-	- 0.02	+ 0.08	- 0.09	- 0.01	- 0.02	-	+ 0.05	+ 0.21	+ 0.20	+ 0.20	+ 0.12
St. John's ... $	- 0.03	- 0.03	+ 0.08	- 0.05	+ 0.05	+ 0.12	- 0.07	-	+ 0.20	+ 0.28	+ 0.43	+ 0.28
Halifax ... $	+ 0.08	- 0.07	+ 0.13	- 0.11	+ 0.03	+ 0.02	+ 0.04	+ 0.06	+ 0.37	+ 0.32	+ 0.41	+ 0.32
Montreal ... $	- 0.10	+ 0.01	+ 0.15	- 0.21	- 0.01	- 0.04	- 0.05	+ 0.19	+ 0.06	+ 0.15	+ 0.10	- 0.10
Ottawa ... $	-	- 0.09	+ 0.22	- 0.09	- 0.04	+ 0.20	- 0.15	- 0.03	+ 0.21	+ 0.17	+ 0.46	+ 0.09
Toronto ... $	- 0.04	- 0.03	- 0.01	- 0.04	- 0.04	- 0.17	+ 0.05	+ 0.03	+ 0.08	+ 0.08	- 0.06	-
Winnipeg ... $	- 0.02	+ 0.01	+ 0.02	+ 0.01	+ 0.03	- 0.01	+ 0.01	- 0.03	+ 0.17	+ 0.22	+ 0.20	+ 0.19
Edmonton ... $	+ 0.05	- 0.03	+ 0.13	- 0.11	- 0.12	- 0.02	+ 0.04	+ 0.04	+ 0.47	+ 0.30	+ 0.31	+ 0.22
Vancouver ... $	+ 0.07	-	+ 0.03	- 0.03	+ 0.01	+ 0.01	+ 0.02	- 0.03	+ 0.26	+ 0.20	+ 0.21	+ 0.20
S.R.U.												
Canada ... $	- 0.05	-	+ 0.04	- 0.14	- 0.02	- 0.08	+ 0.04	+ 0.06	+ 0.05	+ 0.08	-	-
St. John's ... $	- 0.01	+ 0.01	+ 0.14	- 0.02	+ 0.05	- 0.01	+ 0.02	+ 0.14	+ 0.09	+ 0.15	+ 0.13	+ 0.01
Halifax ... $	- 0.07	+ 0.06	+ 0.07	- 0.12	+ 0.06	- 0.09	+ 0.07	+ 0.01	+ 0.42	+ 0.55	+ 0.40	+ 0.40
Montreal ... $	- 0.16	-	+ 0.13	- 0.30	- 0.02	+ 0.01	- 0.08	+ 0.18	- 0.23	- 0.09	- 0.08	- 0.29
Ottawa ... $	- 0.04	- 0.08	+ 0.18	- 0.02	- 0.01	+ 0.13	- 0.14	+ 0.01	+ 0.07	+ 0.10	+ 0.31	- 0.01
Toronto ... $	- 0.04	- 0.03	- 0.06	- 0.06	- 0.04	- 0.16	+ 0.07	+ 0.02	+ 0.05	+ 0.05	- 0.08	+ 0.05
Winnipeg ... $	- 0.04	+ 0.03	- 0.10	- 0.01	+ 0.11	- 0.12	+ 0.02	+ 0.05	- 0.03	+ 0.12	- 0.03	+ 0.09
Edmonton ... $	+ 0.07	-	+ 0.16	- 0.23	- 0.18	- 0.07	+ 0.07	+ 0.06	+ 0.20	- 0.05	- 0.12	- 0.21
Vancouver ... $	+ 0.05	+ 0.02	- 0.01	- 0.10	+ 0.01	- 0.12	+ 0.13	+ 0.04	+ 0.14	+ 0.10	- 0.04	+ 0.10
N.S.R.U.												
Canada ... $	+ 0.05	- 0.05	+ 0.14	- 0.03	- 0.02	+ 0.04	- 0.03	+ 0.03	+ 0.44	+ 0.37	+ 0.46	+ 0.29
St. John's ... $	- 0.03	- 0.03	+ 0.05	- 0.06	+ 0.05	+ 0.16	- 0.11	- 0.04	+ 0.25	+ 0.33	+ 0.52	+ 0.36
Halifax ... $	+ 0.16	- 0.15	+ 0.18	- 0.10	-	+ 0.10	+ 0.02	+ 0.10	+ 0.34	+ 0.18	+ 0.43	+ 0.27
Montreal ... $	+ 0.01	+ 0.06	+ 0.17	- 0.05	- 0.01	- 0.13	+ 0.02	+ 0.19	+ 0.61	+ 0.59	+ 0.40	+ 0.25
Ottawa ... $	+ 0.08	- 0.08	+ 0.29	- 0.19	- 0.10	+ 0.32	- 0.17	- 0.09	+ 0.48	+ 0.30	+ 0.70	+ 0.24
Toronto ... $	- 0.03	+ 0.01	+ 0.09	+ 0.01	- 0.05	- 0.22	- 0.02	+ 0.12	+ 0.20	+ 0.18	- 0.05	- 0.16
Winnipeg ... $	+ 0.01	- 0.02	+ 0.15	+ 0.02	- 0.03	+ 0.07	-	- 0.08	+ 0.38	+ 0.34	+ 0.43	+ 0.28
Edmonton ... $	+ 0.02	- 0.07	+ 0.13	- 0.01	- 0.04	+ 0.01	+ 0.01	+ 0.02	+ 0.77	+ 0.71	+ 0.79	+ 0.67
Vancouver ... $	+ 0.08	-	+ 0.08	+ 0.09	+ 0.02	+ 0.20	- 0.15	- 0.13	+ 0.43	+ 0.37	+ 0.57	+ 0.34

NOTE: Slippage rates have been deleted temporarily from this table as historical rates are not yet available on the revised basis. However, a table is given on next page giving slippage rates for February 1974 and March 1974 calculated on population projections based on 1971 Census.

DEFINITIONS

RELATED TO SECTION 1A

Slippage - population slippage is defined as the percentage difference between the Census population projection, Pp (preliminary projections based on the 1971 Census) for a given month and the population estimate $\hat{P}p$ derived from the Labour Force Survey sample for the same month. It is given by

$$\frac{Pp - \hat{P}p}{Pp} \cdot 100$$

RELATED TO SECTION 1B

Total non-response - proportion of households which were not interviewed due to lack of co-operation or their unavailability to the survey interviewer.

RELATED TO SECTION 1C

Variance - There is a certain amount of error present in any estimate obtained from a sample, (due to the lack of complete information about the population). The average of the estimates, obtained from the various possible samples, is called the expected value of the estimate. If the difference between an estimate and its expected value is squared and this squared difference is averaged over all possible samples which could be selected from the sample frame, we obtain the sampling variance. The square root of the sampling variance is called the standard deviation. The coefficient of variation of an estimate is defined to be the standard deviation of the estimate divided by the estimate times 100 to convert to a percentage. If the expected value of an estimate is not equal to the true population value then the estimate is said to be biased. Among the causes of this bias are non-response, slippage and processing errors. The square of the difference between an estimate and the true population value averaged over all possible samples from the sample frame is called the mean square error. The variance estimate for a characteristic is influenced by changes in the population size, the sample size, and the frequency of the characteristic being considered. For these reasons the variance estimates should be standardized; the binomial factor is one such standardization. The binomial factor is defined to be the ratio of the variance estimate to an estimate of what the variance would be if a similar sample has been obtained through a simple random sampling procedure. The binomial factor measures the behaviour of the sample design relative to a simple random sample as far as the characteristic is concerned.

RELATED TO SECTION 1D

Percentage of Rejected Documents - The Summary Table and Charts give the percentage of labour force documents requiring clerical edits due to missing or inconsistent entries in the regular labour force items.

Careless Errors - The term "careless errors" refers to omissions, poor marks and inconsistent entries on the Labour Force schedule for identification, sex, marital status, relationship to head and age as taken from the entries on the Household Record Card, plus the failure to answer item 26, "Was this person interviewed?"

RELATED TO SECTION 1E

Enumeration Cost per Household - The per household costs are calculated using the total number of households sampled for the survey in relation to the cost incurred to do the interviewing, in terms of fees paid to the interviewer (hourly rated employee) and the interviewer expenses to cover the assignment (mileage, etc).

Interviewing refers to obtaining the information by personal visit to the household, or by telephoning the household to obtain the information, for the LF survey and for supplementary questions added to the LF document for the current month.

Variances in the Labour Force Survey

Introduction

Another important quality measure pertaining to the statistics is that of sampling variance, defined by the mean square deviation of statistics over all possible samples from the expected value over all possible samples which may be selected from the sample frame. Due to the well designed sampling procedure and to careful processing of the data, the bias of this statistic should be small. The estimated variances, the standard deviations, and the coefficients of variation are calculated each month for a set of characteristics. From the estimated standard deviations and the coefficients of variation confidence intervals for published statistics, ignoring the effect of non-sampling errors, may be obtained under the assumption that estimated totals are normally distributed about the true population value. Thus if it is found that an unemployed estimate possesses a coefficient of variation of 3% then an unemployed estimate may vary 6% (2 standard deviations) about the true population value in either direction in 95% of the samples that could be drawn from the LFS frame.

Rough confidence intervals may be obtained from the lettered symbols given in the monthly publications (The Labour Force: Catalogue 71-001). Due to time deadlines for the release of these publications the lettered symbols are based on the average of the monthly coefficients of variation for the previous year. The lettered symbol, which indicates a range in which the coefficient of variation is expected to fall, gives the user an indication of the reliability of the estimate.

From any particular survey the obtained coefficient of variation will not necessarily fall within the range indicated by the lettered symbol found in the publication because of 1) the sampling variance of the estimated coefficient of variation and 2) the seasonal effects which are not reflected in the published lettered symbols.

Example: For an estimate of 175,000 with a coefficient of variation of 2.47% then in 95% of all different samples that could be selected from the sample frame, the estimate would deviate from the true population value by not more than 8,645.

The complexity of the formulas for the theoretical variance based on the multi-stage sampling procedure for the Labour Force Survey make it difficult to determine from the calculations alone if the variances are high considering the sample design or the frequency of the characteristic even if they are high for purposes of analysis. Because coefficients of variation decrease with increases in the

population, the sample size and the frequency of the characteristic, the calculated variances should be compared with some standard values.

Assuming a similar number of persons were drawn at random in each province one such standard value is the corresponding random sample variance, which is a function of the population size, the sample size, and the frequency of the characteristic. The ratio of the estimated variance from the computer programs to this random sample variance or the binomial factor is calculated monthly for each characteristic.

The higher the factor the worse the sample design relative to a simple random sample as far as the characteristic is concerned. A high factor may be the result of limitations imposed by cost restrictions and not the result of a bad sample design.

High factors do indicate where further analysis should be undertaken and where there is potential for improvement in the present sample design. High variances at provincial levels are frequently attributable to one or two PSUs so that for quality studies, the analysis will often centre around studies of sub-provincial contributions to the total variance. In table 1 are included the binomial factors and the coefficients of variation for several estimates.

Definitions

Sampling variance: The average of squared deviations of statistics over all possible samples from the average value of the statistics over all possible samples (neglecting the effect of non-sampling errors).

Non-sampling errors: Deviations from the true (but usually unknown) value of a statistic caused by factors other than sampling (such as non-response, slippage, coding errors).

Standard deviation: The square root of the sampling variance.

Coefficient of variation: The standard deviation expressed as a percent of the estimate of a quantity, sometimes termed percent standard deviation.

Confidence intervals: The intervals in which the unknown value of the population to be estimated from a sample may be expected to lie a given percent of the time (commonly 95% of the time).

Binomial Factor (design effect): The ratio of the variance of a statistic as estimated from the sample considering the sample design compared with the variance of a statistic obtained in a simple random sample of the same size.

Reliability: Not really a statistical term but referring in general to the standard deviation, variance of a statistic, and confidence interval. In Table 1, the coefficient of variation is used as a measure of the reliability of estimates.

The following table presents some results of the monthly Labour Force Survey. Included are estimates, coefficients of variation and binomial factors for the characteristics Employed, Unemployed and "In Labour Force".

Table 1

Estimates, Their Coefficients of Variation and Their Binomial Factors

For Canada and by Province For March, 1974

	Population Estimate	Employed				Unemployed				In Labour Force			
		Estimate	C.V.	Symbol	B.F.	Estimate	C.V.	Symbol	B.F.	Estimate	C.V.	Symbol	B.F.
Canada	16,413	8,732	0.37	A	1.16	599	2.46	C	1.75	9,331	0.32	A	1.01
Nfld.	377	140	2.54	C	1.87	34	6.75	E	2.42	174	1.80	C	1.37
PEI	81	35	3.99	D	1.46	5	20.56	G	3.20	40	2.68	D	0.82
N.S.	565	262	1.41	C	1.29	25	7.08	E	1.78	287	1.32	C	1.35
N.B.	464	208	1.60	C	1.29	26	11.43	F	5.41	234	1.36	C	1.15
Que.	4,588	2,312	0.86	B	1.29	218	4.41	D	1.77	2,530	0.72	B	1.08
Ont.	5,990	3,390	0.60	B	1.04	174	4.59	D	1.39	3,564	0.54	A	0.94
Man.	717	394	1.57	C	1.30	15	13.04	F	1.63	409	1.36	C	1.06
Sask.	653	331	1.44	C	0.93	12	14.58	F	1.62	344	1.37	C	0.91
Alta.	1,205	703	1.01	B	1.05	28	10.54	F	1.84	731	1.00	B	1.13
B.C.	1,765	956	1.09	C	1.31	61	8.50	E	2.42	1,017	0.86	B	0.93

C.V. Coefficient of Variation

B.F. Binomial Factor

Estimates in Thousands

Alphabetic Symbol	Percent of Estimates at One Standard Deviation
A	0.0 - 0.5%
B	0.6 - 1.0%
C	1.1 - 2.5%
D	2.6 - 5.0%
E	5.1 - 10.0%
F	10.1 - 16.5%
G	16.6 - 25.0%
H	25.1 - 33.3%
J	33.4 - 50.0%
K	50.1 +

Analysis of Sub-Provincial Contributions to the Variance

On the basis of the binomial factor corresponding to the estimated total of a characteristic, the decision is made whether to study sub-provincial contributions to the variance of this characteristic or not. A high binomial factor or a substantial increase in the factor over the corresponding factors for the previous months indicate that a study should be carried out to determine the origins of the high variance or increase in the factor.

A portion of the provincial variance is contributed by each subunit or pair of PSUs and these contributions tallied over all subunits and pairs of PSUs yield the variance estimate of the characteristic total at the provincial level. The purpose of the analysis of subprovincial contributions to the variance is to determine those subunits or PSUs where the portion of the variance contributed is excessively large relative to a desired portion based on the population and sampling ratio in the sub-provincial area. Such "problem areas" are determined by a statistical test of hypothesis.

The results of the analysis for those characteristics and provinces, as determined by their binomial factors, are presented in Tables 2a, 2b, etc. The percentage of the variance contributed is simply the contribution by the pair of PSUs or subunit expressed as a percentage of the provincial variance. The desired percentage contribution is the ratio of a weighted population estimate of the subunit or stratum to a weighted total population estimate of the province expressed as a percentage. The weights (a weight of 1 for NSRU PSUs and a weight of 1.5 for SRU subunits) adjust the population estimates to take into account the difference in sampling ratios between NSRU and SRU parts of the province.

Adjusted Binomial Factors

The binomial factor or the ratio of the variance of a Labour Force estimate to the variance of this estimate if similar results had been obtained from a simple random sample is a measure of the quality of the variances of Labour Force estimates. For those estimates where the binomial factor is large, either absolutely or relative to previous months, a detailed study of the subprovincial contributions to the variance is carried out. This analysis essentially separates the subprovincial areas into two groups:

1) Those strata and subunits which contributed significantly in excess of the desired contribution by the area.

and 2) Those strata and subunits which contributed more or less the desired contribution by the area.

The question may arise as to what the binomial factor would have been if the strata or subunits in (1) contributed more or less the desired contribution, based on the estimated population. The adjustment which is proposed and which is being tried out for analysis is as follows:

(i) The variance remains unchanged in (2)

(ii) The variance is reduced in (1) and the combined variance in (1) and (2) is reduced so that the contribution in (1) and (2) are in direct proportion to weighted sample takes.

A more detailed write-up and algebraic development is to be presented in an LFSP series report.

The adjusted binomial factor reduces the binomial factor to a value it would have been had the variance contribution by the areas identified by (1) contributed in the same proportion as the areas identified in (2). If this adjusted binomial factor has approximately the same value as previous binomial factors in which a subprovincial analysis was not deemed necessary, then the subprovincial areas identified in (1) were the cause of the high variance. If the adjusted binomial factor is still in excess of previous binomial factors then the subprovincial areas identified in (1) although part of the cause of the high variance were not the only causes of a high variance; other causes might be a general clustering of the characteristic throughout the whole province, gradual deterioration of the stratification or other reasons. These binomial factors do possess a sampling variance and this results in rigorous interpretations of these binomial factors being impossible to make.

In the quality report variance,write-up, the adjusted binomial factors will be calculated to determine whether or not the subprovincial areas identified appear to be the main cause for the high variance.

Analysis of Subprovincial Contributions to the Variance for the March 1974 Survey

The binomial factor for the estimate of Unemployed in Newfoundland increased from 1.78 in February to 2.42 in March. The results of the analysis of the subprovincial contributions to the provincial variance are presented below.

Table 2a

Actual vs. Desired Contribution to the Variance of Unemployed in Newfoundland by PSU's and Subunits

PSU's or Subunits	Percentage of the Variance Contributed	Desired Percentage Contribution
04021 & 04025	15.3	1.8
04041 & 04043	11.2	1.7
03102	4.4	1.0
All other PSU's and Subunits	69.1	95.5

The adjusted binomial factor of 1.75 is within reasonable bounds for the characteristic Unemployed in Newfoundland. This indicates that the above noted subprovincial areas are the main cause of the high variance.

In the province of New Brunswick the binomial factor for Unemployed at 5.41 is exceptionally high and in fact for the past four surveys this factor has been large (in excess of 3.75). A detailed analysis of the subprovincial contributions to the provincial variance produced two pairs of PSU's from which the actual contribution greatly exceeded the desired contribution.

Table 2b

Actual vs Desired Contribution to the Variance of Unemployed in New Brunswick by PSU's and Subunits

PSU's or Subunits	Percentage of the Variance Contributed	Desired Percentage Contribution
33003 & 33005	47.1	3.3
33022 & 33027	20.0	3.3
All other PSU's and Subunits	32.9	93.4

At 1.91 the adjusted binomial factor for Unemployed in New Brunswick although considerably greater than 1 is approximately the same as the binomial factor for some past months. The two strata in economic region 3 are responsible for the increase in the sampling variance.

In Quebec the binomial factor of 1.77 for the estimate of Unemployed increased from the February value of 1.63. The following subprovincial areas contributed a disproportionately large portion of the provincial variance.

Table 2c

Actual vs Desired Contribution to the Variance of Unemployed in Quebec by PSU's and Subunits

PSU's or Subunits	Percentage of the Variance Contributed	Desired Percentage Contribution
40009 & 40012	11.4	0.7
40027 & 40029	10.8	1.0
41004 & 41013	12.9	0.5
41029 & 41031	4.4	1.0
46201	3.7	0.6
All other PSU's and Subunits	56.8	96.2

With an adjusted binomial factor of 1.04 the above subprovincial areas are the main cause of the high variance for the estimate of Unemployed in Quebec.

The binomial factor for the estimate of Unemployed in Manitoba increased from 0.97 in February to 1.63 in March. There were two paired areas which contributed to this high factor.

Table 2d

Actual vs Desired Contribution to the Variance of Unemployed in Manitoba by PSU's and Subunits

PSU's or Subunits	Percentage of the Variance Contributed	Desired Percentage Contribution
61022 & 61026	16.6	3.5
65016 & 65018	13.9	3.7
All other PSU's and Subunits	69.5	92.8

In Manitoba the adjusted binomial factor for Unemployed is 1.22. This value is within reasonable limits of the binomial factors for previous surveys and so the conclusion can be drawn that the above two strata are the main cause of the high variance in Manitoba for the estimate of Unemployed.

In Saskatchewan the binomial factor for Unemployed had a value of 1.62 which is slightly higher than it was in February but remains higher than in most previous surveys. The results of the analysis of subprovincial contributions to the variance are presented below.

Table 2e

Actual vs Desired Contribution to the Variance of Unemployed in Saskatchewan by PSU's and Subunits

PSU's or Subunits	Percentage of the Variance Contributed	Desired Percentage Contribution
74036 & 74037	13.8	3.7
71101 - 71103	14.6	4.7
All other PSU's and Subunits	71.6	91.6

Although the binomial factor corresponding to the estimate of Unemployed in Saskatchewan, fluctuates from month to month, the adjusted binomial factor of 1.27 falls with this range and it appears that most of the cause of the high variance can be attributed to the PSU's 74036 and 74037 and to subunits 71101, 71102 and 71103.

In British Columbia the binomial factor for the estimate of Unemployed was 2.42. This binomial factor indicates that an analysis of the subprovincial contributions to the variance should be carried out.

Table 2f

Actual vs Desired Contribution to the Variance of Unemployed in British Columbia by PSU's and Subunits

PSU's or Subunits	Percentage of the Variance Contributed	Desired Percentage Contribution
92003 & 92013	27.8	2.9
97003 & 97008	15.5	3.2
All other PSU's and Subunits	56.7	93.9

The adjusted binomial factor for the estimate of Unemployed in British Columbia is 1.46. This indicates that the two strata mentioned are the main reason for a high variance of the estimate of Unemployed in British Columbia.

For the February survey the pair of PSU's 20022 and 20024 contributed 23.7% of the variance of the estimate of Unemployed in Nova Scotia. The desired contribution by the pair of PSU's was 1.6%. The percentage of persons unemployed differed greatly between the two psu's: in PSU 20022 the percentage of persons unemployed was 2.8% whereas in PSU 20024 the percentage of persons unemployed was 19.1%. The unemployment tended to occur in PSU 20024 in all industries as the following table demonstrates.

Table 3a

Estimates and Sample Takes by Characteristic and PSU

for PSU's 20022 and 20024 for the February Survey

	Employed				Unemployed				In LF			
	20022		20024		20022		20024		20022		20024	
	Est.	#	Est.	#	Est.	#	Est.	#	Est.	#	Est.	#
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Other Primary Industries	254	3	94	1	0	0	70	1	254	3	164	2
Manufacturing	466	6	83	1	0	0	204	2	466	6	287	3
Construction	279	4	201	2	0	0	341	4	279	4	542	6
Transp. and other Utilities	71	1	301	4	0	0	247	3	71	1	548	7
Trade	446	5	128	2	0	0	88	1	446	5	216	3
Finance	0	0	0	0	0	0	0	0	0	0	0	0
Services	439	6	1009	12	128	2	322	4	567	8	1331	16
Public Admin.	0	0	293	4	0	0	0	0	0	0	293	4
Total	1954	25	2118	26	128	2	1272	15	2082	27	3390	41

The pair of PSU's 33003 and 33005 in New Brunswick contributed 42.6% of the variance of Unemployed in New Brunswick for the February survey compared with a desired contribution of 3.7%. There was an unequal distribution of persons in the Labour Force by industry with high unemployment in some of these industries, notably manufacturing, construction and trade. The percentage of persons unemployed in PSU 33003 was 21.2% and in PSU 33005 it was 3.5%.

Table 3b

Estimates and Sample Takes by Characteristic and PSU

for PSU's 33003 and 33005 for the February Survey

	Employed				Unemployed				In Labour Force			
	33003		33005		33003		33005		33003		33005	
	Est.	#	Est.	#	Est.	#	Est.	#	Est.	#	Est.	#
Manufacturing	140	2	216	3	638	9	61	1	778	11	277	4
Construction	350	3	143	2	779	10	242	3	1129	15	385	5
Trade	423	6	352	5	321	5	0	0	744	11	352	5
Total	2028	27	3129	41	2096	29	382	5	4124	56	3511	46

NON-RESPONSE

The contents of this appendix are taken from publication NR74-3 (March 1974), Non-Response Rates in the Canadian Labour Force Survey, prepared by F.T. Newton and J.R. Norris, Household Surveys Development Staff, and E.T. McLeod of Field Division.

Non-Response Rates

I. Introduction

There are a number of ways of measuring the quality of the Labour Force Survey. One such method is the calculation of non-response rates. The sampling variability of weighted up statistics is inversely proportional to the response rate so that published figures based on a sample with only 80% response rate (20% non-response rate) will have 90/80 or 1.125 times the sampling variability of corresponding figures based on the same sample with 90% response rate (or 10% non-response rate). Together with the increase in sampling variability caused by higher non-response rates there is also a possible increase in the mean square error as a result of the non-response bias. If the characteristics of non-respondents are significantly different from those of respondents, then the higher the non-response rate, the greater the contribution to the mean square error by the non-response bias. The extent of this bias is unknown at present but must be obtained from outside sources of similar data or from special experiments on non-response characteristics.

The non-response rates are presented in the form of graphs for Canada and for regional offices. The rate of non-response is given for each of the four components[1] and for total non-response by month and year.

Non-response follows a marked pattern seasonally, generally peaking in the summer months and declining in the spring and autumn (Graph G1). The seasonality effect is caused by the "temporarily absent[1]" component which increases sharply during the summer months when people are generally away on vacation (Graph G1).

II. Format of Non-Response Graphs and Monthly Meeting

The non-response rate for each regional office is presented by component on a separate page. This format facilitates the examination of the contributions of each component of non-response to the total non-response. In this form, comparison of regional offices can also be made.

The monthly meeting on non-response with J.R. Norris and F.T. Newton, Labour Force Methodology Section and E.T. McLeod, Field Division, deals with the more pronounced movements in the current non-response data.

Commencing with the report on January, 1973, non-response bar charts have been included to show the non-response for each Economic Region (E.R.) in each regional office. The R.O. levels, in total, are shown in a chart under the section headed Canada. Table 1, contains, for Canada and each regional office, the total non-response and each of its components.

[1] See definitions on Page 2

Definitions

Total households includes all sampled households but excluding vacant dwellings, households not be interviewed, etc.

Non-response is defined as the proportion of total households which were not interviewed for the reasons shown and is the sum of the four components given below.

1 Temporarily absent. When all household members are away for the entire interview week. (T.A.)

2 No one home. When after a reasonable number of callbacks, there is no responsible member to interview. (N_1)

3 Refusal. When a responsible member of the household definitely refuses to provide the survey information requested. (N_2)

4 Other. When none of the foregoing reasons are applicable, e.g., roads impassable, enumerator not available, death, illness, language problems, etc. (N_{3-5})

Canada

The overall non-response rate at the Canada Level increased from 6.0% in February 1974 to 6.4% in March 1974. Changes in non-response rates at the component level were as follows:

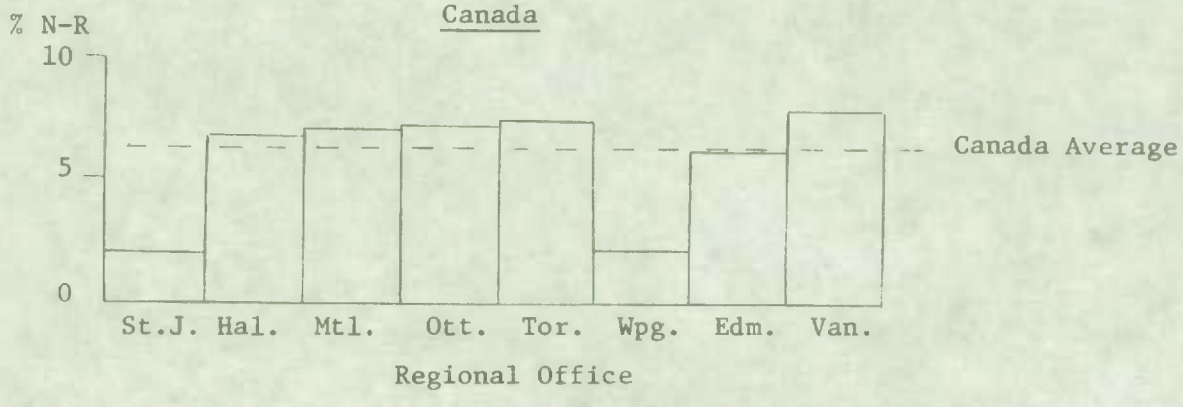
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	1.9	1.8	0.1
N1	1.8	1.7	0.1
N2	1.7	1.6	0.1
Other	1.0	0.9	0.1
Overall	6.4	6.0	0.4

As seen in the above tables, the increases in all component levels of non-response were equal.

Compared with last year's March rate (6.8%), the overall non-response rate for March 1974 was lower. Changes in non-response rates at the component level occurred as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	1.9	1.9	-
N1	1.8	2.0	-0.2
N2	1.7	1.9	-0.2
Other	1.0	1.0	-
Overall	6.4	6.8	-0.4

It is shown from above that the decreases in the N1 and N2 components were the reason for the overall non-response rate change this year.



St. John's

The overall non-response rate for the St. John's Regional Office decreased slightly from 2.0% in February to 1.9% in March 1974. Differences in non-response rates at the component level were as follows:

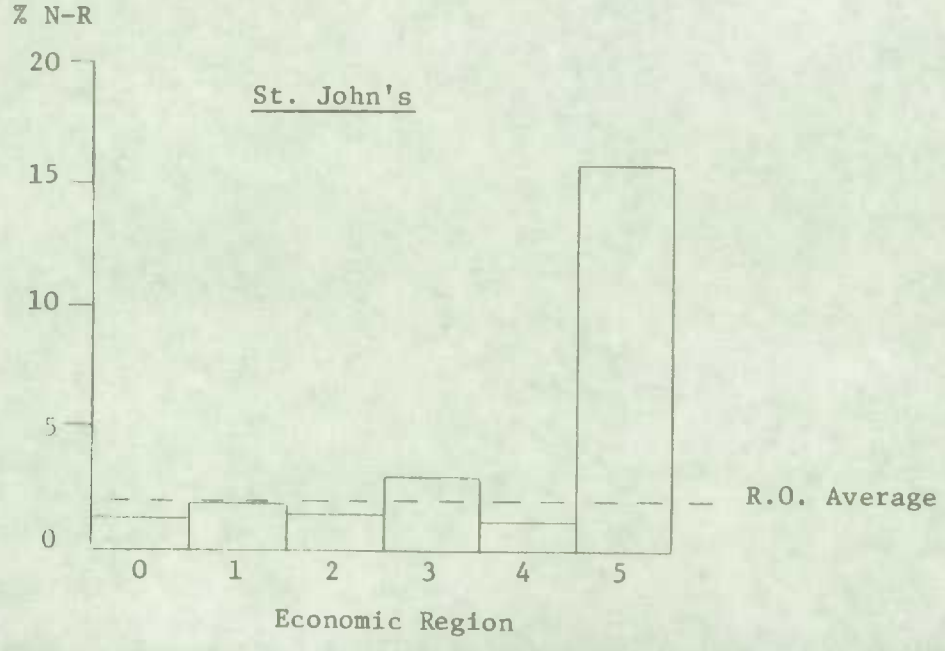
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	0.4	0.6	-0.2
N1	0.6	0.6	-
N2	0.5	0.6	-0.1
Other	0.4	0.2	0.2
Overall	1.9	2.0	-0.1

While the T.A. and N2 components decreased this month, the "Other" component increased. Thus no major change in the overall rate occurred.

From March 1973 to March 1974 the overall non-response rate decreased. Non-response rates at the component level changed as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	0.4	1.1	-0.7
N1	0.6	1.2	-0.6
N2	0.5	0.6	-0.1
Other	0.4	0.3	0.1
Overall	1.9	3.2	-1.3

It is evident from the above table that the changes in the T.A. and N1 component were the major factors in lowering the overall non-response rate this year.



Halifax

In the Halifax Regional Office, the overall non-response rate increased from 5.9% in February 1974 to 6.8% in March 1974. The changes in non-response rates at the component level are given below:

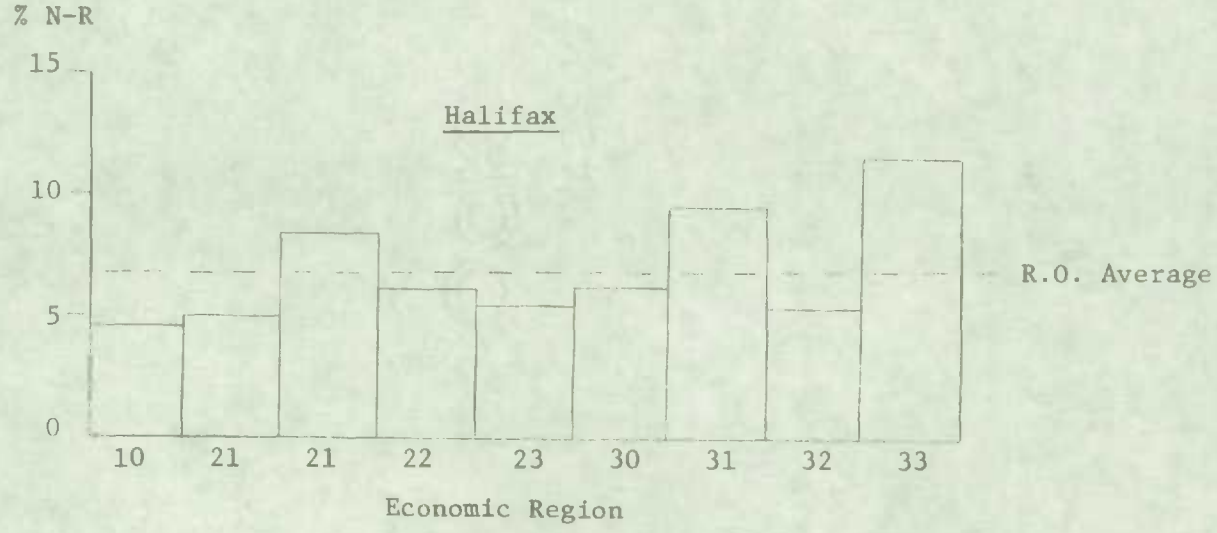
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	1.7	1.3	0.4
N1	1.6	1.9	-0.3
N2	1.5	1.6	-0.1
Other	2.0	1.1	0.9
Overall	6.8	5.9	0.9

As noted from the above table, the increases in the overall non-response rate were caused by increases in the T.A. and "Other" components. Of the 110 households in the "Other" category, twenty-two were not contacted because of interviewer's illness and Labour Force Documents for forty-nine households were delayed in the mail and were not received by the Regional Office in time for processing.

Compared with last year's March overall rate, this year's March rate was higher. Changes in the non-response rate by component took place as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	1.7	1.8	-0.1
N1	1.6	1.6	-
N2	1.5	2.1	-0.6
Other	2.0	0.8	1.2
Overall	6.8	6.3	0.5

Although there were decreases in the T.A. and N2 components, the increase in the "Other" component caused the overall non-response rate to increase.



Montreal

In the Montreal Regional Office, the overall non-response rate decreased from 7.7% in February to 7.1% in March 1974. Differences in non-response rates at the component level occurred as follows:

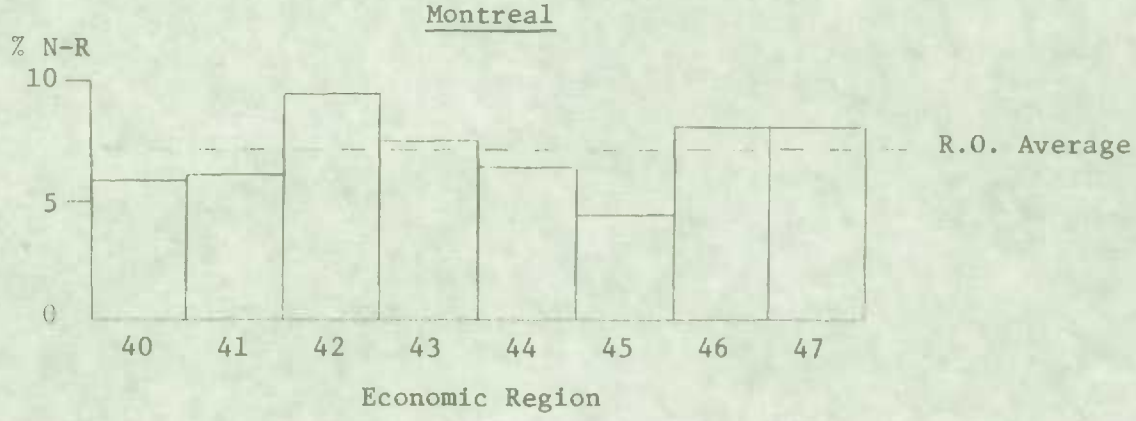
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	1.3	1.6	-0.3
N1	2.7	2.0	0.7
N2	2.0	2.1	-0.1
Other	1.1	2.0	-0.9
Overall	7.1	7.7	-0.6

While there was an increase in the N1 component, the decrease in the other three components resulted in a decrease in the overall rate.

Compared with last year's (1973) March overall non-response rate, this year's rate was higher. By component, changes in non-response rates were as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	1.3	1.1	0.2
N1	2.7	2.1	0.6
N2	2.0	2.1	-0.1
Other	1.1	1.5	-0.4
Overall	7.1	6.8	0.3

The most noticeable changes were the 0.6% increase in the N1 component and the 0.4% decrease in the "Other" component.



Ottawa

The overall non-response rate from February 1974 to March 1974 increased in the Ottawa Regional Office. Differences in non-response rates at the component level are presented as follows:

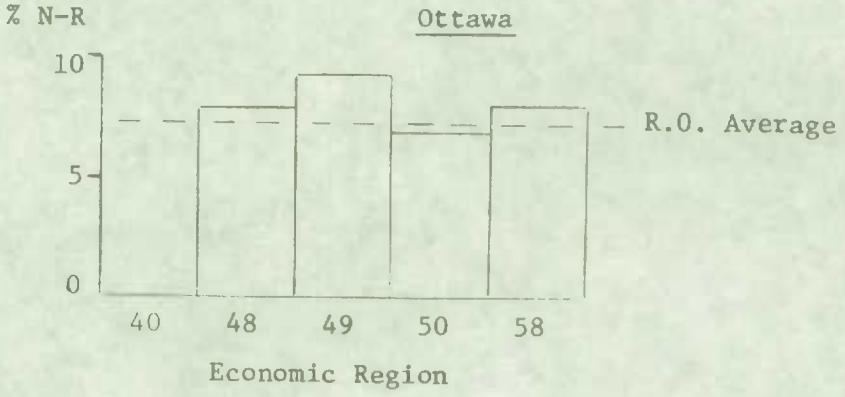
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	2.1	1.4	0.7
N1	2.5	3.2	-0.7
N2	1.3	1.3	-
Other	1.4	0.8	0.6
Overall	7.3	6.7	0.6

It should be noted from the above table, that while the N1 component showed a decrease, the increases in the T.A. and "Other" components were sufficient to raise the overall non-response rate by 0.6%. Furthermore it should be noted that of the twenty-nine households in the "Other" category nineteen were not contacted because of impassable road conditions.

An increase occurred in the overall non-response rate from March 1973 to March 1974. Non-response rates at the component levels changed as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	2.1	1.8	0.3
N1	2.5	1.5	1.0
N2	1.3	1.5	-0.2
Other	1.4	0.4	1.0
Overall	7.3	5.2	2.1

The increase in the overall non-response rate was mainly due to increases in the N1 and "Other" components.



Toronto

The overall non-response rate in the Toronto Regional Office increased from 6.0% in February 1974 to 7.4% in March 1974. Changes in non-response rates at the component level are shown below:

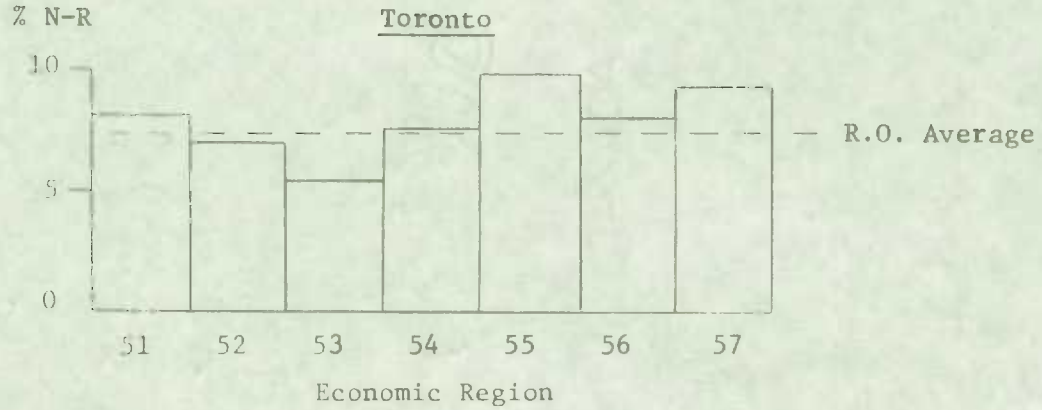
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	3.3	2.5	0.8
N1	1.8	1.3	0.5
N2	1.8	1.5	0.3
Other	0.5	0.7	-0.2
Overall	7.4	6.0	1.4

The increases in the T.A. and N1 components mainly contributed to the increase in the overall non-response rate. Futhermore, the increases in the T.A. and N1 components may have resulted from the fact that interview week coincided with the school break.

In comparison to the overall non-response rate in March 1973 (7.0%), this year's March rate was higher. Changes in non-response rates by component occurred as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	3.3	2.6	0.7
N1	1.8	1.9	-0.1
N2	1.8	1.9	-0.1
Other	0.5	0.6	-0.1
Overall	7.4	7.0	0.4

The increase in the overall non-response rate was due to the increase in the T.A. component.



Winnipeg

In the Winnipeg Regional Office, the overall non-response rate decreased from 3.0% in February to 2.2% in March 1974. Changes in the non-response rates at the component level occurred as follows:

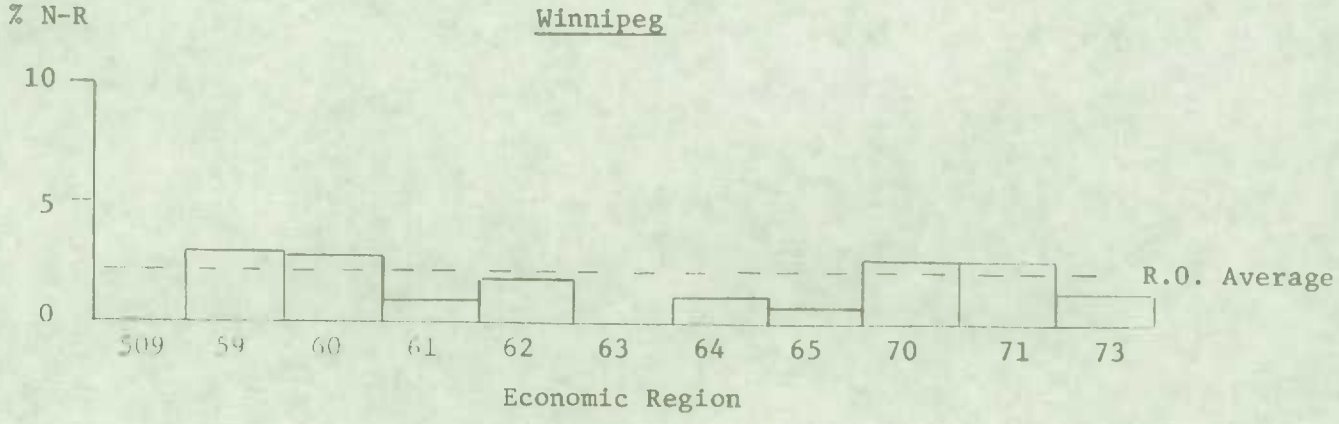
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	0.9	1.5	-0.6
N1	0.3	0.7	-0.4
N2	0.8	0.6	0.2
Other	0.2	0.2	-
Overall	2.2	3.0	-0.8

From the above table, it can be seen that the major factors in lowering the overall non-response rate were decreases in the T.A. and N1 components.

Compared with last year's March overall non-response rate (2.8%), this year's March rate (2.2%) was lower. By component, differences in non-response rates were as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	0.9	1.0	-0.1
N1	0.3	0.9	-0.6
N2	0.8	0.7	0.1
Other	0.2	0.2	-
Overall	2.2	2.8	-0.6

It is evident from the above table that the decrease in the overall non-response rate was due to decreases in the T.A. and N1 components.



Edmonton

The overall non-response rate for the Edmonton Regional Office increased from 5.0% in February 1974 to 6.3% in March 1974. Shown below are changes in the non-response rates at the component level:

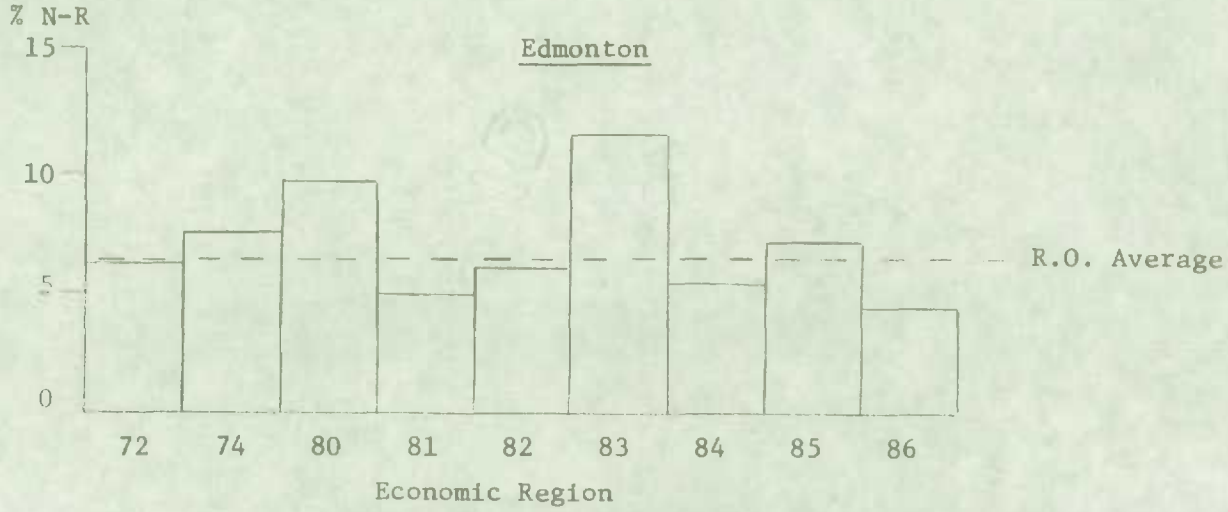
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	1.8	1.9	-0.1
N1	1.8	1.2	0.6
N2	1.5	1.4	0.1
Other	1.2	0.5	0.7
Overall	6.3	5.0	1.3

Increases in the N1, N2 and "Other" components of non-response were responsible for the increase in the overall non-response rate. It should be noted that thirty-three of the forty-six households classified as "Other" were not contacted because of impassable road conditions.

Compared with last year's March overall non-response rate, this year's rate for March was much lower. Changes in the non-response rates at the component level occurred as follows:

	March 1974	March 1973	Change (1973 to 1974)
T.A.	1.8	3.4	-1.6
N1	1.8	2.7	-0.9
N2	1.5	2.2	-0.7
Other	1.2	0.8	0.4
Overall	6.3	9.1	-2.8

Although, from the first table, there was an increase in the overall rate from February 1974 to March 1974, the Edmonton Regional Office has still done a fine job in lowering this year's March rate compared with that of March 1973. The rates in the T.A., N1 and N2 components have been reduced considerably.



Vancouver

In the Vancouver Regional Office, the overall non-response rate decreased from 8.4% in February 1974 to 8.0% in March 1974. Changes in non-response at the component level were recorded as follows:

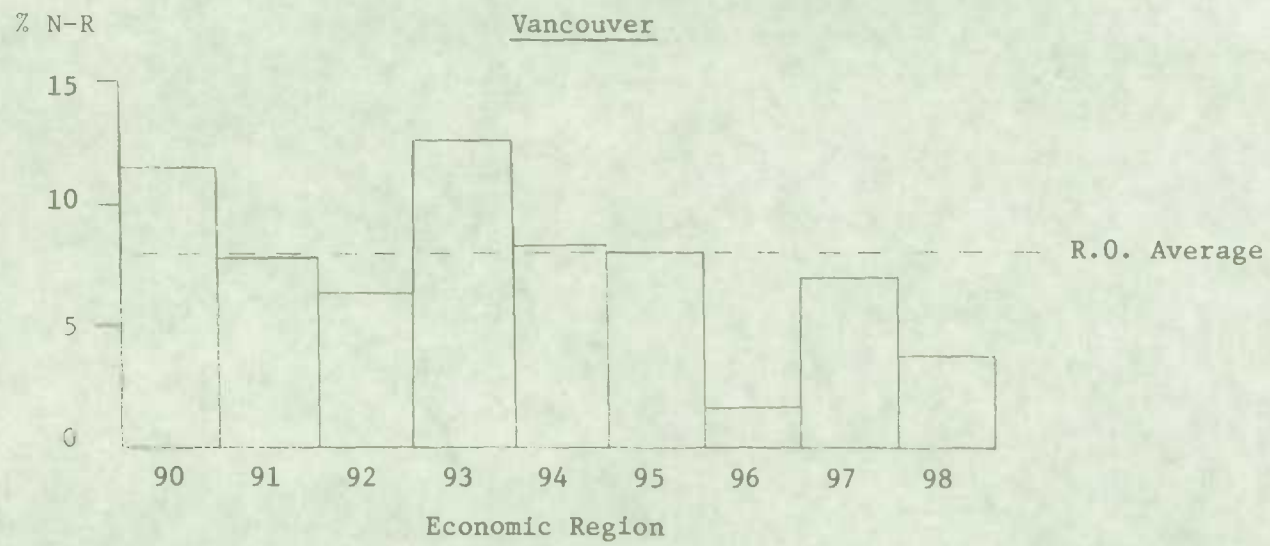
	March 1974	February 1974	Change (Feb. to Mar.)
T.A.	2.1	2.4	-0.3
N1	1.9	2.4	-0.5
N2	3.1	2.8	0.3
Other	0.9	0.8	0.1
Overall	8.0	8.4	-0.4

Even though there was a reduction in the overall non-response rate the refusal rate has increased by 0.3% from February to March. The most noticeable change in the refusal rate occurred in Economic Region 94 which contains over 50% of the sampled households in the Vancouver Regional Office. In this Economic Region, the refusal rate climbed from 3.5% in February to 4.1% in March. The increase in the refusal rate may be due, in part, to recent newspaper articles pertaining to the leakage of confidential information on individuals stored in government computers and to the selling of mailing lists drawn up from confidential income tax information.

Compared with last year's March overall non-response rate, this year's March rate was lower. Changes in the non-response rates at the component level were as follows:

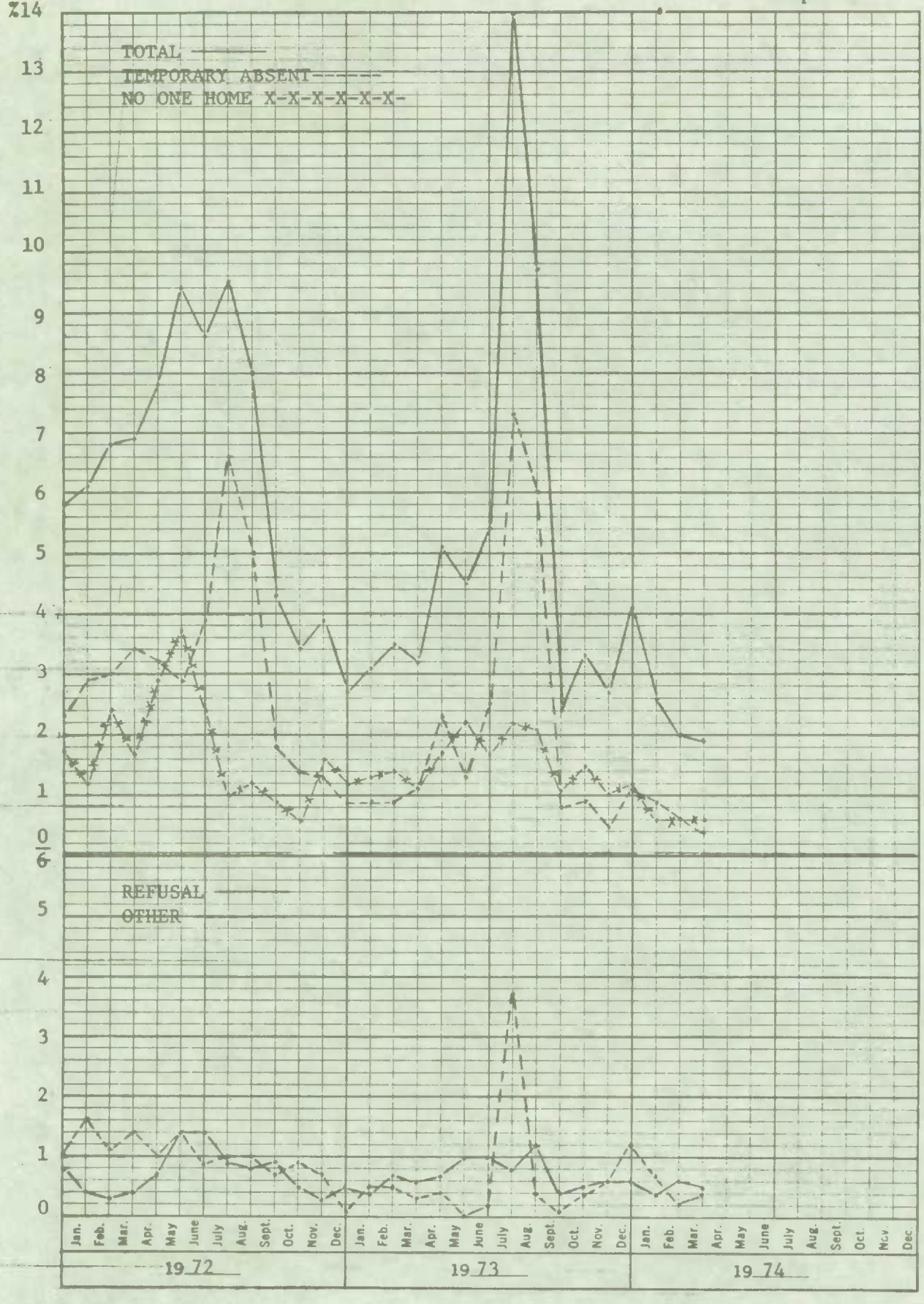
	March 1974	March 1973	Change (1973 to 1974)
T.A.	2.1	1.9	0.2
N1	1.9	3.4	-1.5
N2	3.1	2.5	0.6
Other	0.9	2.7	-1.8
Overall	8.0	10.5	-2.5

It is evident from the above table that decreases over 1% in each of the N1 and "Other" components reduced the overall non-response rate. However the refusal rate (N2) climbed by 0.6% from March 1973 to March 1974.

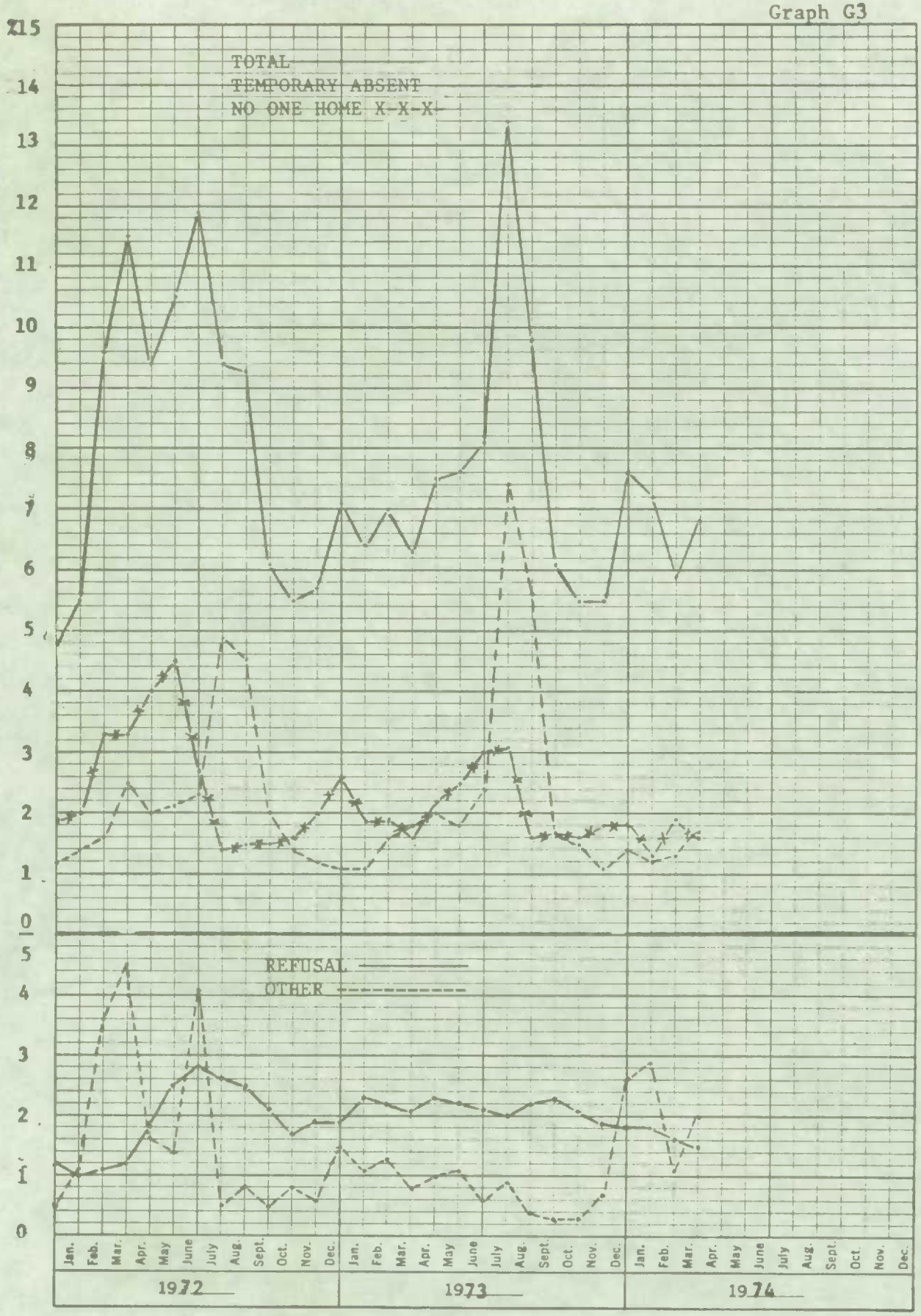

% N-R
Vancouver
15
10
5
0
R.O. Average
90
91
92
93
94
95
96
97
98
Economic Region

Graph G1

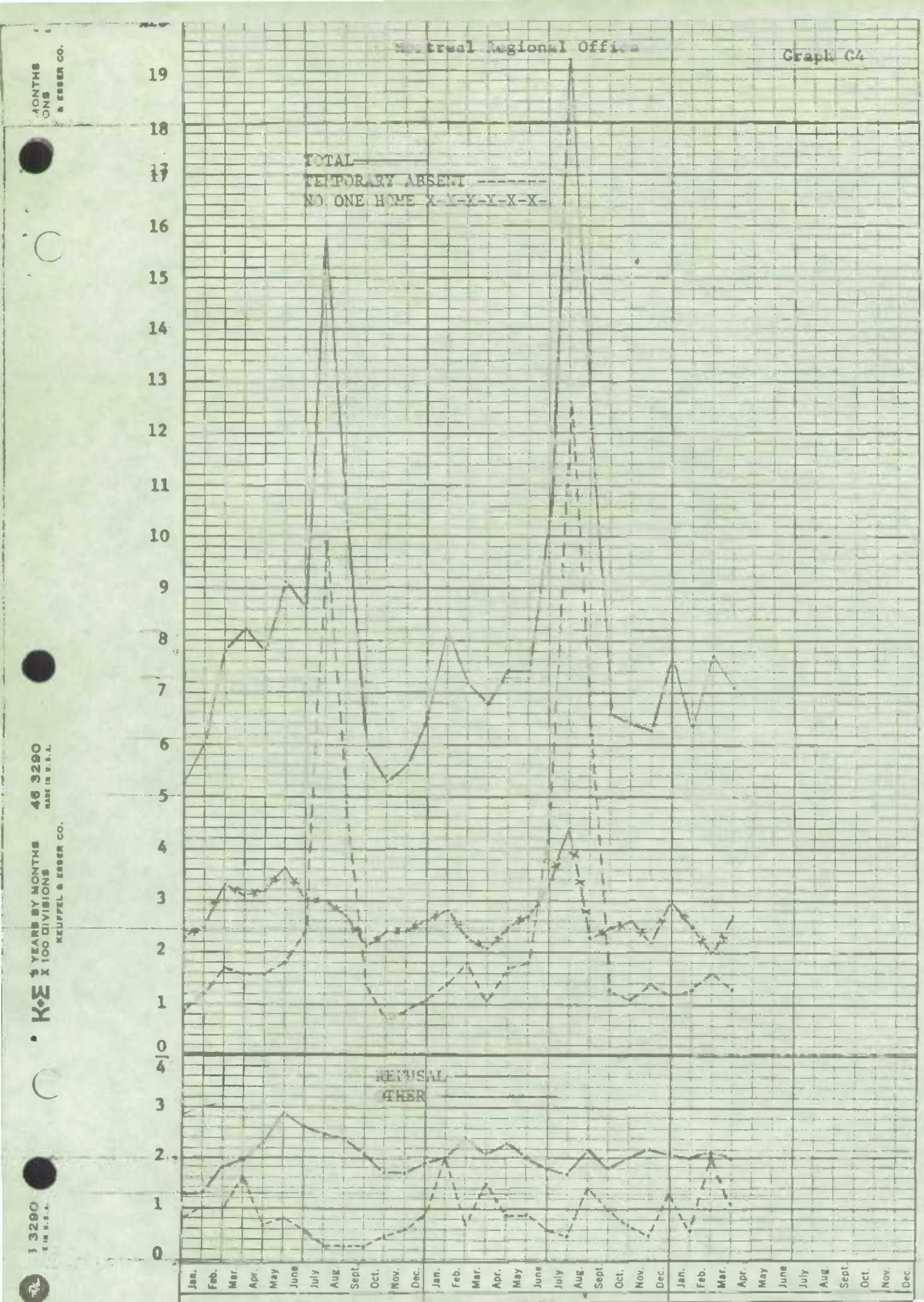
Graph G2



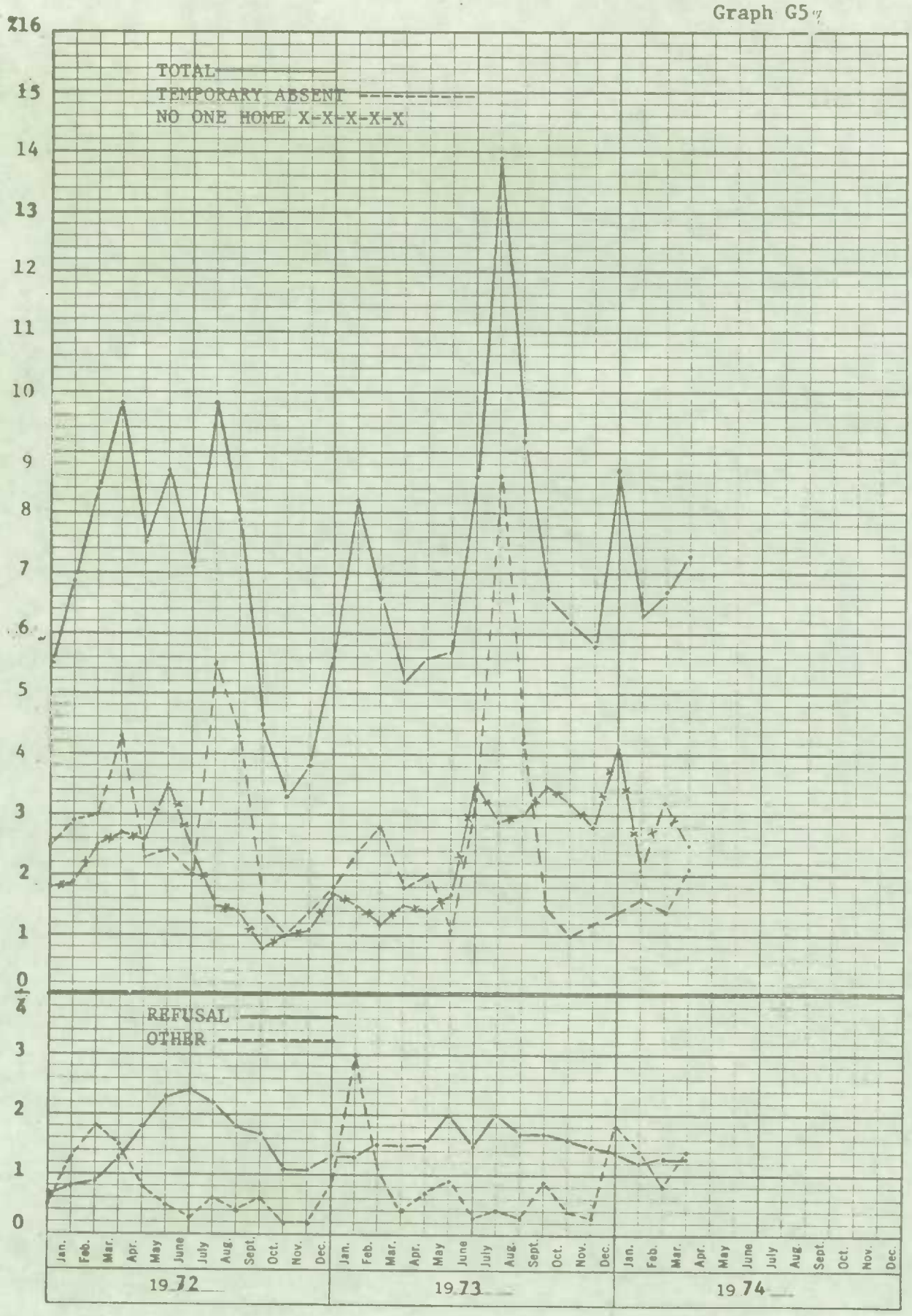
Graph G3



Graph C4

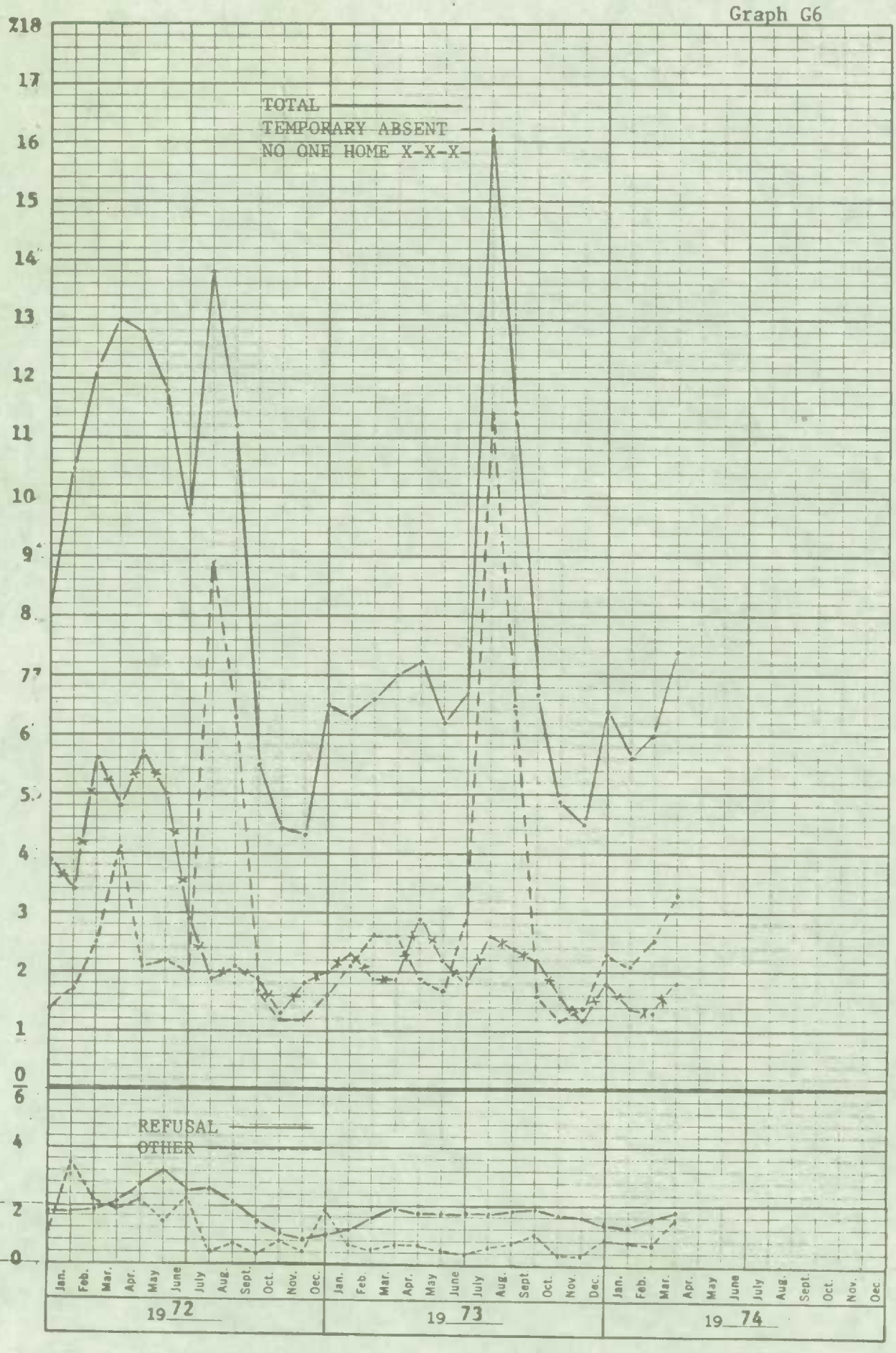

Montreal Regional Office
TOTAL
TEMPORARY ABSENT
NO ONE HOME
REFUSAL
OTHER
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
4
3
2
1
0
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

Graph G5



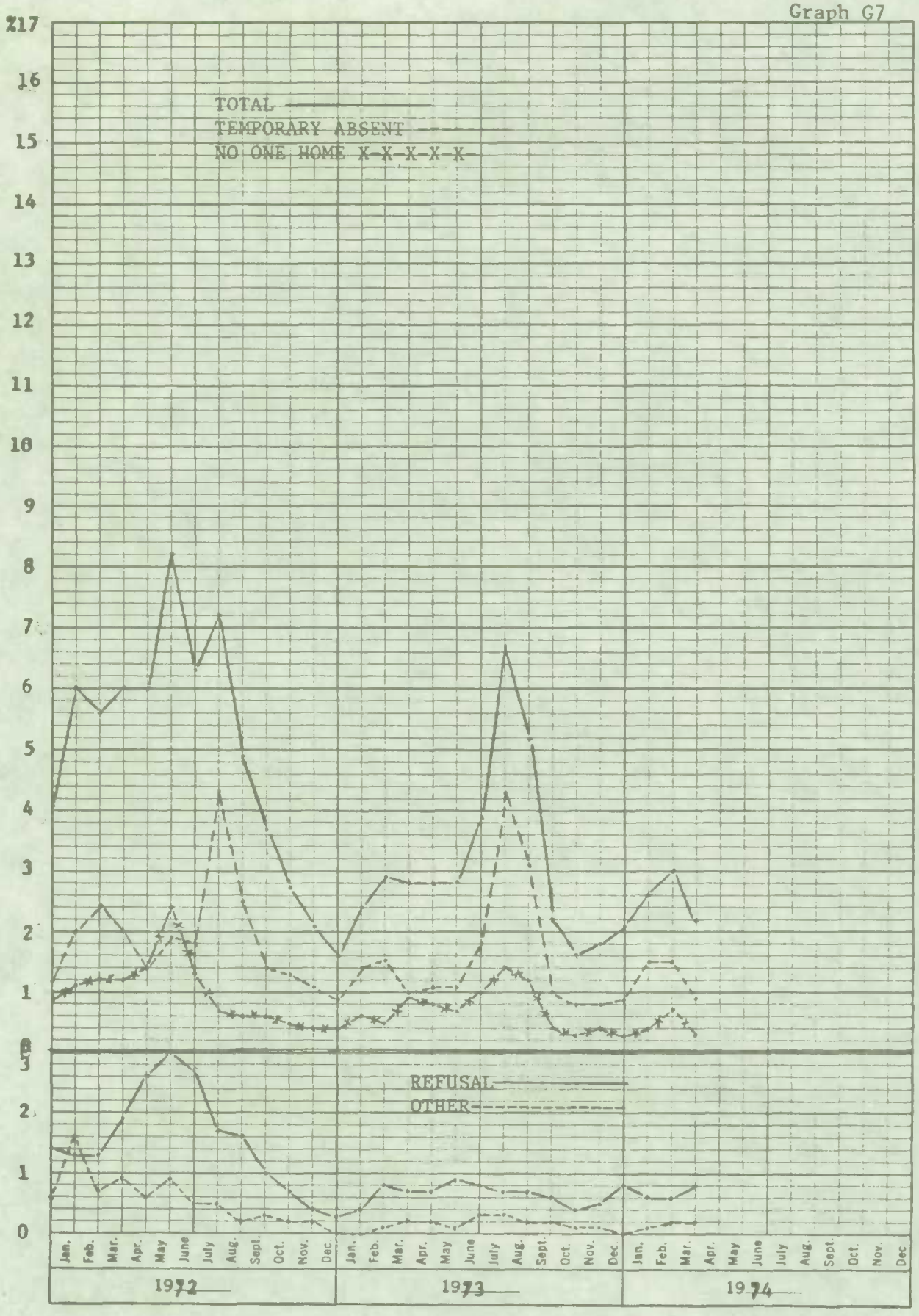
Toronto Regional Office

Graph G6

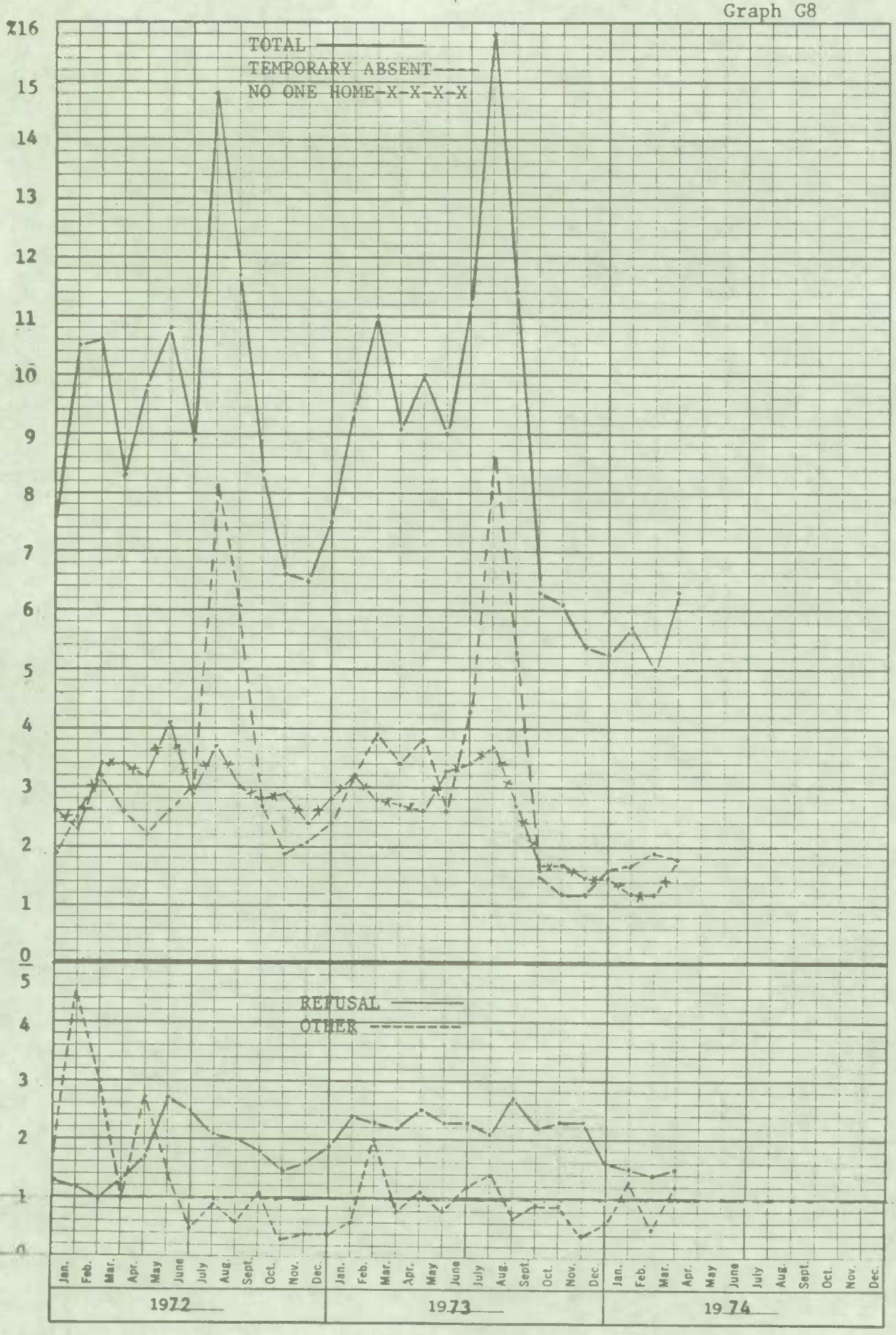


Winnipeg Regional Office

Graph G7



Graph G8



Graph G9

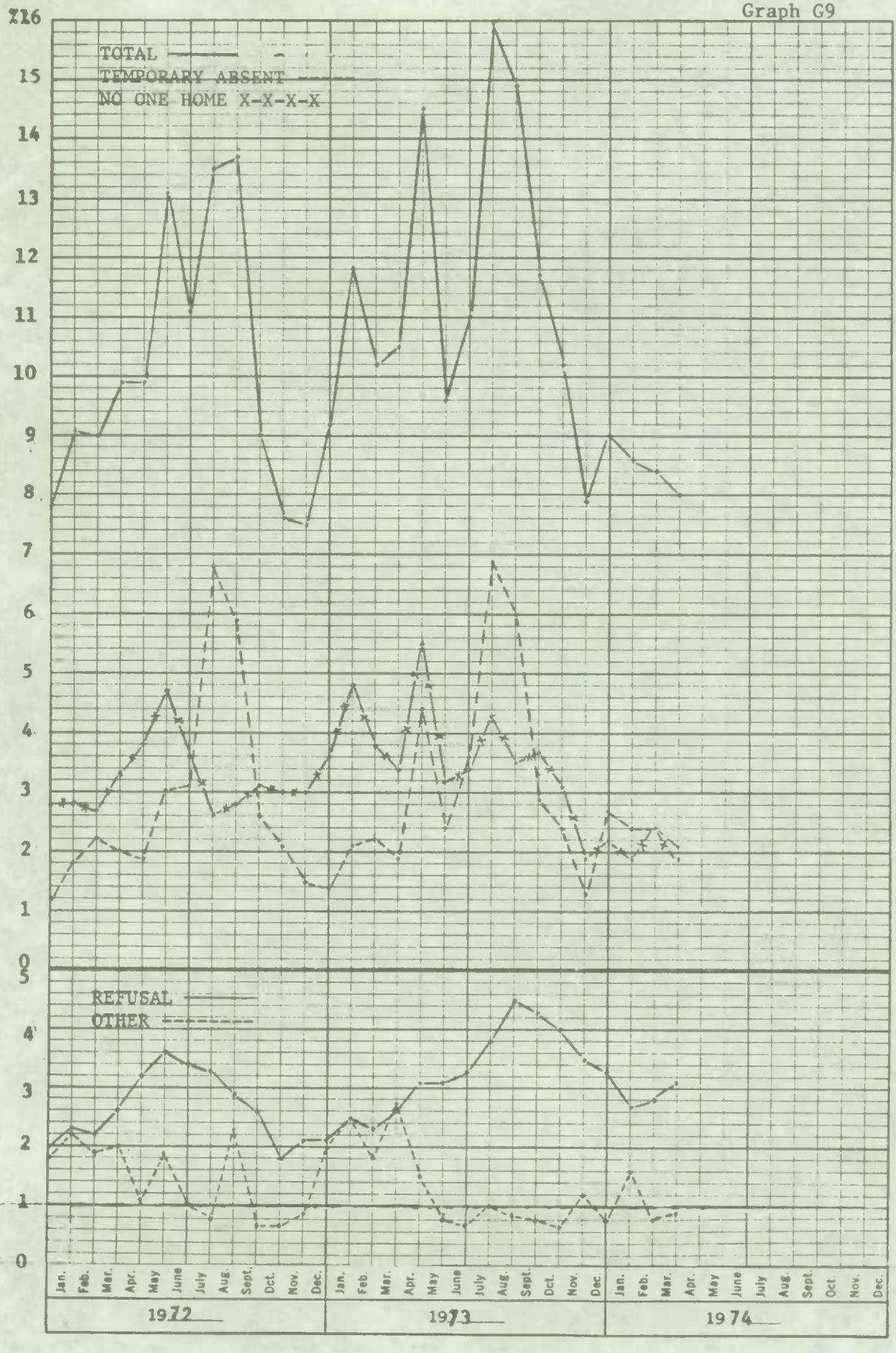


TABLE 1.

March, 1974.

NON-RESPONSE RATES BY COMPONENT,

CANADA, AND REGIONAL OFFICES

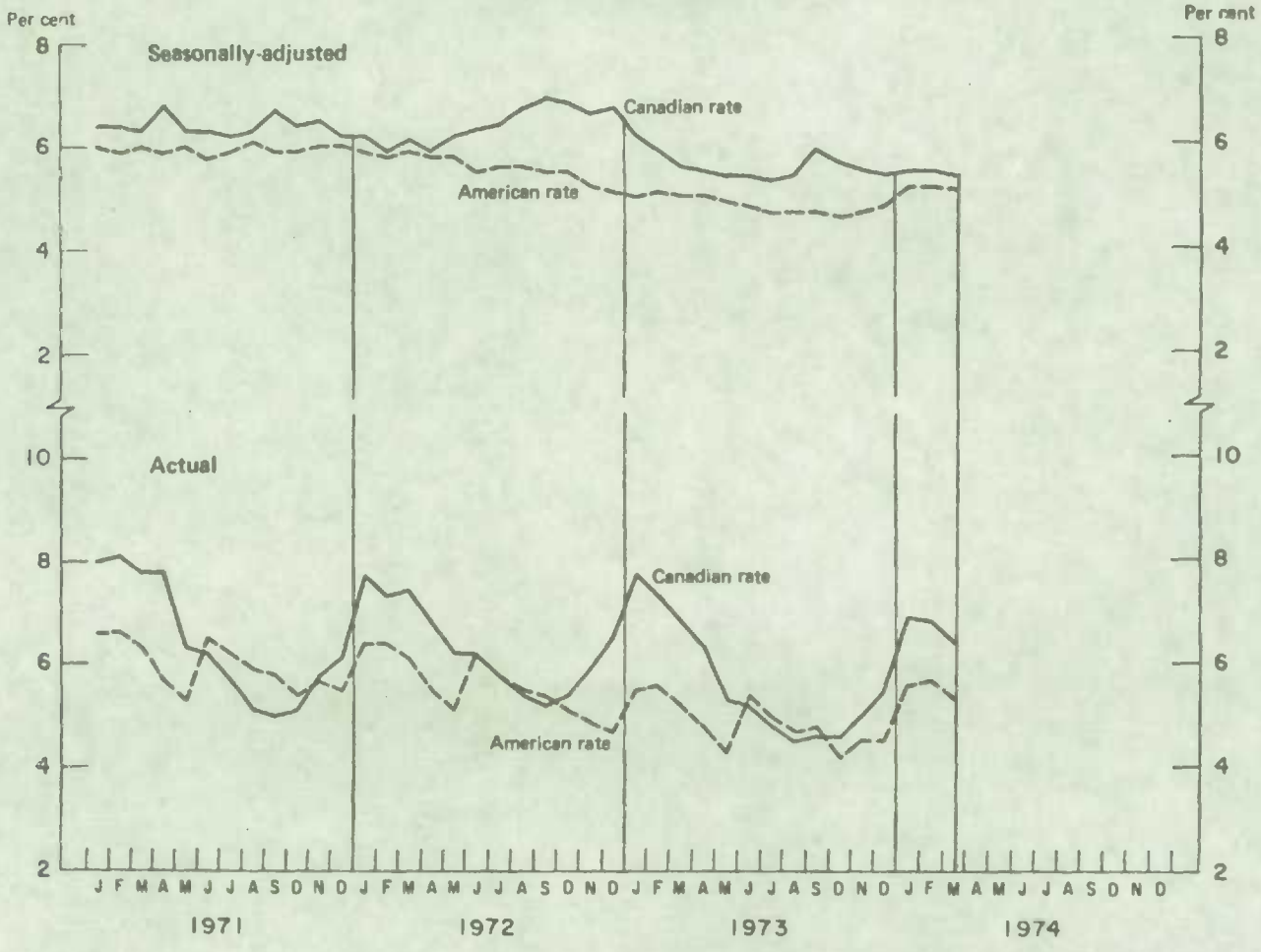
(Percent)

Office(s)	Total	T. A.	N. 1.	N. 2.	Other
Canada	6.4	1.9	1.8	1.7	1.0
St. John's	1.9	0.4	0.6	0.5	0.4
Halifax	6.8	1.7	1.6	1.5	2.0
Montreal	7.1	1.3	2.7	2.0	1.1
Ottawa	7.3	2.1	2.5	1.3	1.4
Toronto	7.4	3.3	1.8	1.8	0.5
Winnipeg	2.2	0.9	0.3	0.8	0.2
Edmonton	6.3	1.8	1.8	1.5	1.2
Vancouver	8.0	2.1	1.9	3.1	0.9

Comparison of Canadian and American Unemployment Rates
March 1973 to March 1974

	Seasonally-Adjusted		Actual	
	Canadian	American	Canadian	American
March	5.4	5.1	6.4	5.3
February	5.5	5.2	6.8	5.7
1974 - January	5.5	5.2	6.9	5.6
1973 - December	5.4	4.8	5.5	4.5
November	5.5	4.7	5.0	4.5
October	5.6	4.6	4.6	4.2
September	5.9	4.7	4.6	4.8
August	5.4	4.7	4.5	4.7
July	5.3	4.7	4.8	5.0
June	5.4	4.8	5.2	5.4
May	5.4	4.9	5.3	4.3
April	5.5	5.0	6.3	4.8
March	5.6	5.0	6.8	5.2

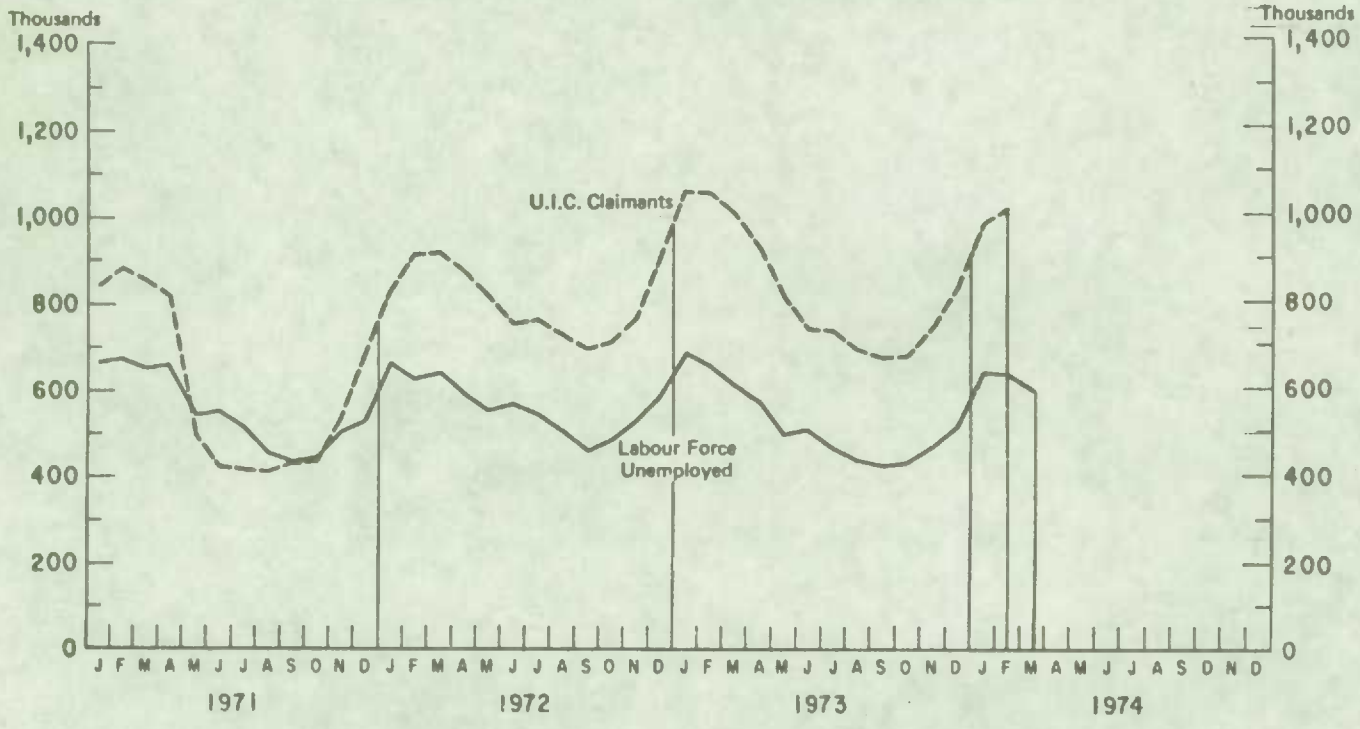
Comparison of Canadian and American Unemployment Rates by Month, January 1971 to Date

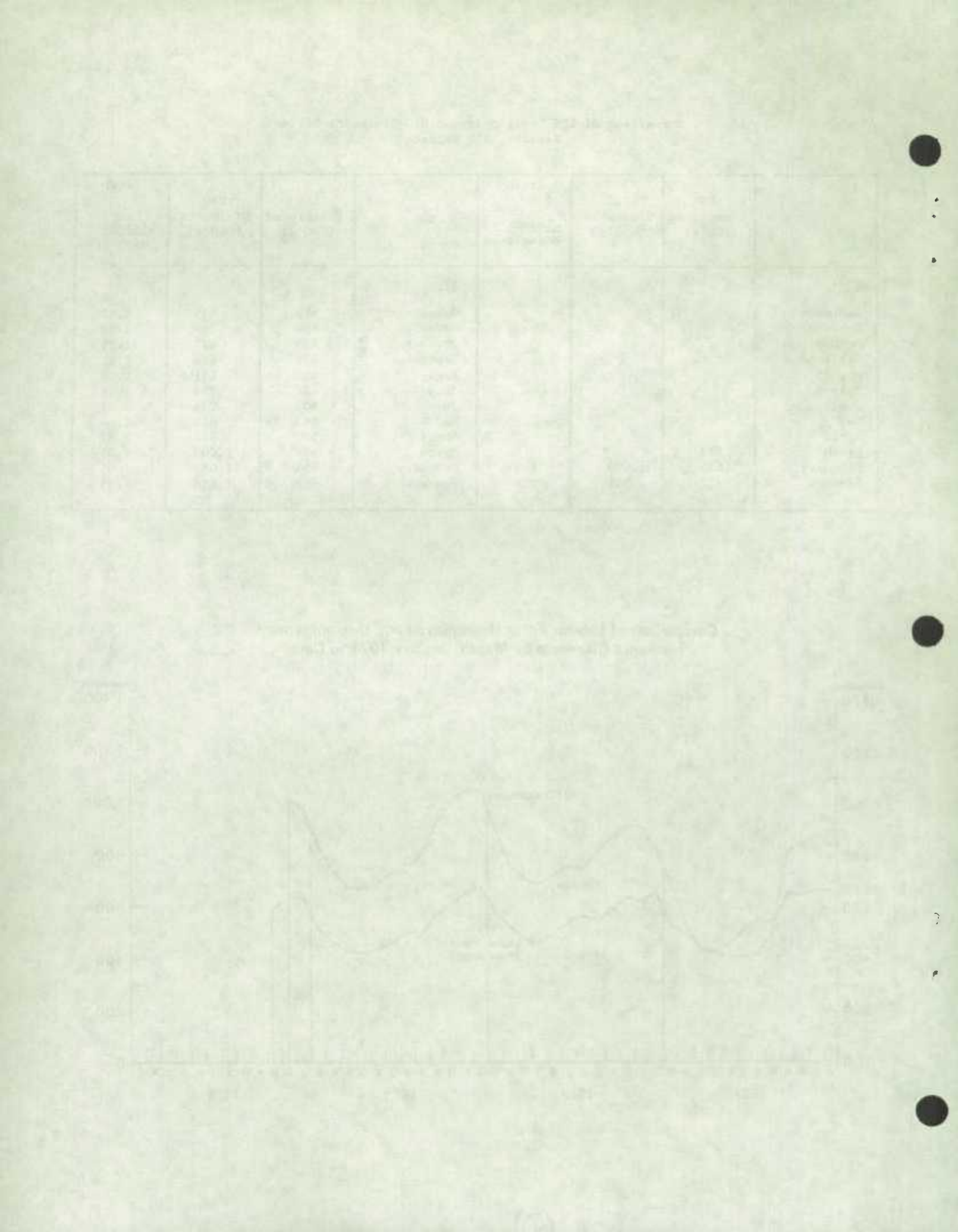


Comparison of LFS Unemployed and UIC Claimants Series
January 1973 to date

	LFS Unemployed (000's)	UIC Claimants (000's)	Ratio Claimants / Unemployed		LFS Unemployed (000's)	UIC Claimants (000's)	Ratio Claimants / Unemployed
1974				1973			
December				December	512	835	1.63
November				November	468	744	1.59
October				October	429	677	1.58
September				September	421	676	1.61
August				August	433	691	1.60
July				July	461	733	1.59
June				June	503	739	1.47
May				May	493	810	1.64
April				April	570	921	1.62
March	599			March	608	1,003	1.65
February	635	1,009	1.59	February	655	1,055	1.61
January	637	981	1.54	January	688	1,056	1.53

Comparison of Labour Force Unemployed and Unemployment Insurance Claimants by Month, January 1971 to Date





Unemployment rate represents the number unemployed as a per cent of the civilian labour force.

Canadian civilian Labour Force, in the Labour Force Survey concept, is composed of that portion of the civilian non-institutional population 14 years of age and over who, during the reference week, were employed or unemployed.

American civilian Labour Force, in the Current Population Survey concept, is composed of that portion of the civilian non-institutional population 16 years of age and over who, during the reference week (which contains the 12th day of the month), were employed or unemployed.

List of some differences in the concepts of claimants and unemployed

UIC	LF unemployed
- need to have worked at least 8 weeks in past year to be eligible	- does not need to have worked before
- interruption of earnings resulting from unemployment, illness or pregnancy	- activity concept: (1) did not work, (2) actively searched for a job, and (3) was able to work
- must be capable of and available for work and unable to obtain suitable employment (except in case of illness and pregnancy)	
- contribution and benefit entitlement ceases for a person: (a) at the age of 70, or (b) to whom a retirement pension under the Canada Pension Plan or the Quebec Pension Plan has at any time become payable	- no upper age boundaries. See activity concept.
- claimants can work and be eligible for total benefit if weekly earnings do not exceed one quarter of weekly rate of benefit; work-related income in excess of 25% of weekly rate is deducted from benefit.	- unemployed cannot have worked worked a single hour in reference week